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STARTLING STORIES

SUMMER ISSUE

15¢

A THRILLING PUBLICATION

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A Hall of Fame Classic

By ED EARL REPP

The HOLLOW *World*

A Complete John Carstairs Novel

By FRANK BELKNAP LONG

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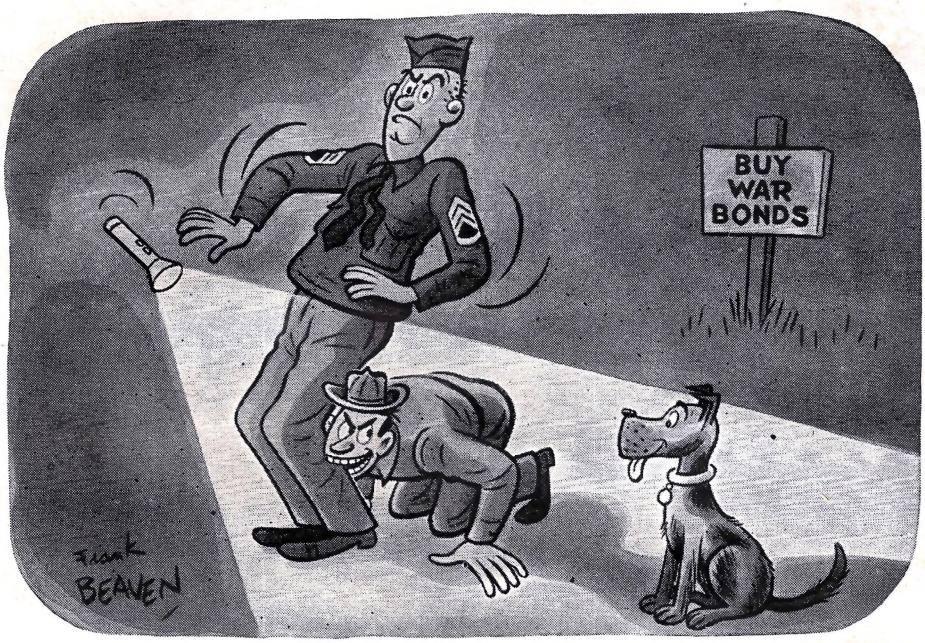

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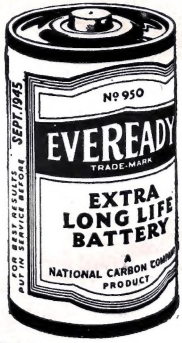

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Vol. 12, No. 2 CONTENTS Summer, 1945

A Complete John Carstairs Novel

The Hollow World

By

FRANK BELKNAP LONG

On the frozen Twelfth Planet, five and a quarter billion miles from Earth, a botanist crime-buster grimly battles a frigid race of monsters that menace humanity—and pits himself against a brutal tyrant of the plant kingdom! 11

Unusual Short Stories

THE RED DIMENSION ..... Ed Earl Repp 66
A Hall of Fame Classic reprinted by popular demand

FATAL THOUGHTS ..... Leslie Northern 74
James Warder uses a terrible new weapon on Rigel's distant planet

Special Features

THE ETHER VIBRATES ..... Announcements and Letters 6
THRILLS IN SCIENCE ..... Oscar J. Friend 61
THIS STARTLING WAR ..... News from the Science Front 73
REVIEW OF FAN PUBLICATIONS ..... Sergeant Saturn 92
MEET THE AUTHOR ..... Frank Belknap Long 95

Cover Painting by Earle Bergey—Illustrating "The Hollow World"

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June, 1945 issue.

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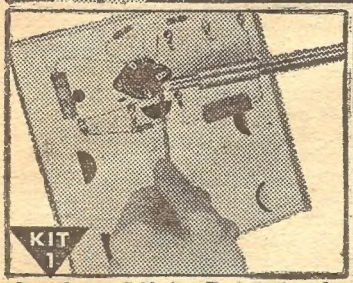

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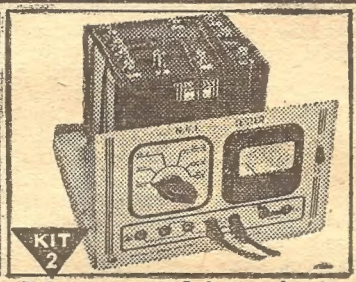

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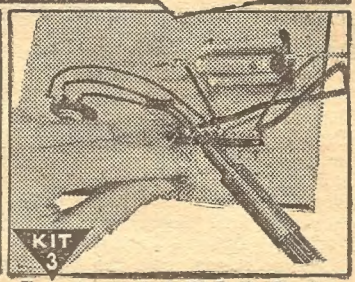
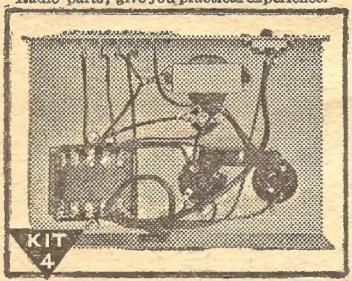
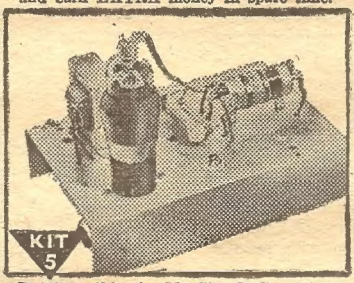


You get parts to build Radio Circuits; then test them; see how they work; learn how to design special circuits; how to locate and repair circuit defects.



You get parts to build this Vacuum Tube Power Pack; make changes which give you experience with packs of many kinds; learn to correct power pack troubles.



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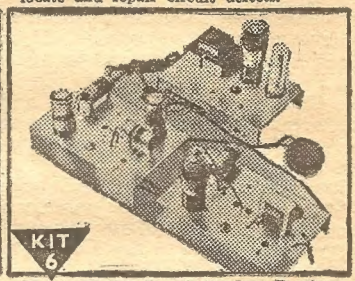

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A Department Where Readers, Writers and Sergeant Saturn Get Together

DICE me for a Ganymedean goulash! It can't be so, Wart-ears—you say you actually got it over the solid space-sender from Earth?

Well, cut off my antigravs and call me flighty—it really is here.

Yes, pee-lots, after thirty days of labor and over a hundred hours of tedious technical toil, the FANCYCLOPEDIA has finally arrived. To Editor John Bristol Speer, Publisher Forrest J. Ackerman and Associate Astrogators Morojo, Daugherty, Brown, Laney, Crozetti and Rogers—congratulations from the old Space Dog himself.

Covering everything in fandom from "Aaanthor Argus" to Allen Zweig, it is a mine of pertinent and impertinent information to be treasured by every true fanzomaniac. It is particularly effective in its lengthy articles on the First, Second and Third Fandoms, on the Deglerian Cosmic Circle and in its historical and occasionally hysterical narrations of fen convention history. In fact, the whole job is impressive, informative and amusing.

Snaggletooth, you old Xeno-jacker, load up all rocket chambers with polychromatic bursts. Frog-eyes, put that Xeno down right beside ye Sarge and prepare to fire a forty-two-gun salute for the FANCYCLOPEDIA.

In honor of this long-awaited event, ye Sarge has also decided to give a banquet. As his orbit in space will soon bisect that of Terra by less than a hundred thousand miles, those of you who wish to attend are welcome. The menu will be as follows, and any kiwis with their own space jaloppies are asked to form rocket-car-pools to bring other fans along.

*Xeno*ld fashioneds
Oysteroids on the half shell
Petite Mar*meteor*
Filet of *Venus*on, *comet*re d'hotel
Egg *planet* saute
Pommes A*lunet*tes
Satellice cream
Eau de *Pluto* *Mars*ala
Prix Ex*orbit*ant

If that isn't a feast to make a Jovian Lucullus drool, ye Sarge will eat it himself. Come one, come all. Bring nothing with you but money, which is what makes the Sarge go. Deposit wallets with Snaggletooth at the spaceport entry. He will return them to you, appropriately lighter (to compensate for the food and drink imbibed) as you leave. A lot lighter, in fact.

And still the misguided sons and daughters of wayward planetoids send in their concepts of this Old Space Dog. Worthy of notice were such notable (?) impressions from Irene Ward (hiya, honey, am I cyute!)—Don Harvey (gremlin yourself, you goat of the etherways)—F. S. Cook (ugh!)—Jack Fortade (Xeno is a five-star, not a four-star, drink)—Jerry Mandel (never again!)—Roger Rehm (you'll rue the day!)—and Bob Hall (move over, Salvador) as well as a nameless something that may as well continue anonymous.

Alas, none of them can see print, despite a spot of merit hither and yon, as the Sarge's

Sergeant Saturn as seen by Dolores Musgrove

visaprojector, through which all such pictures must be sent for Terrean reproduction, takes only India ink. Which is why the drawing of Dolores Musgrove of El Reno, Oklahoma, gets the nod.

Look out for those swinging drawers, Frog-eyes! You'll drop that crate of Xeno just the way Wart-ears dropped the jugs on the lower left. Which is why he isn't in the picture. Stop sulking, Wart-ears, Dolores would probably

(Continued on page 82)

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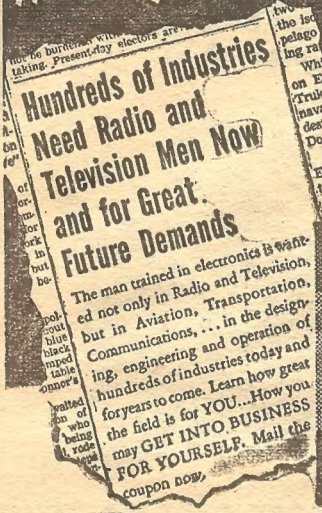
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_____Soup Spoons @ 3 for $1 _____Knives @ 2 for $1

My total order amounts to $_____

Free Rogers Silver Polishing Cloth with Cash orders of $5 or more.

Name_____
(Please Print Clearly)

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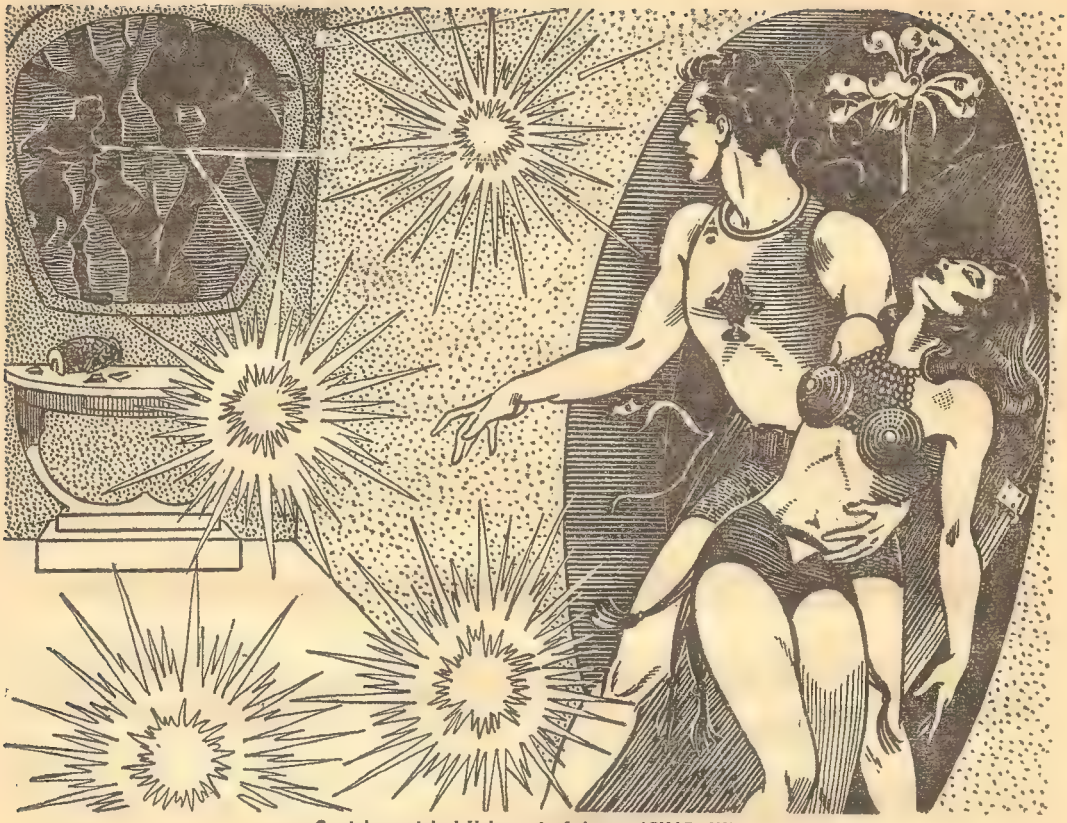
City_____ State_____



Carstairs snatched Helen out of danger (CHAP. III)

THE HOLLOW WORLD

By FRANK BELKNAP LONG

On the frozen Twelfth Planet, five and a quarter billion miles from Earth, a botanist crime-buster grimly battles a frigid race of monsters that menace humanity!

PROLOGUE

The Enormous Web

O'HARA seemed more frightened than the others, perhaps because he was further down in the darkness.

"Where are we?" he asked hoarsely.

It wasn't just an ordinary darkness. It had come on without warning almost five billion miles from the Sun. Now it had overlapped them in smothering folds, and when the five men moved it rustled.

The five had looked straight and often into the bright face of danger, but now their eyes were a wet shine for forty feet in a vertical direction. O'Hara was the furthest down, clinging to something that didn't seem to have any substance. Above him were the other members of the Trans-Plutonian Exploring Expedition.

"Where are you, O'Hara?" came from

JOHN CARSTAIRS PITS HIMSELF AGAINST A

Andy McFall. The little Scotch botanist was the third, counting down from the top. He was clinging like the others with both hands to something that felt as though it oughtn't to have been there, and might be gone at any moment.

Exploring the cave had been O'Hara's idea. It had loomed like a gigantic, hollow hand on the towering cliff wall toward which the five explorers had been moving all morning, with their headbeams casting wide swaths of radiance on the gleaming soil of the coldest and most distant of the planets.

They had climbed up in a single file and let themselves down into the blackness. They had advanced cautiously at first, feeling their way between towering stalagmites which glowed with a faint, ghostly radiance, and then more boldly as it dawned on them that they were in no immediate danger.

The floor of the cave sloped slightly, and was as smooth as glass. From subterranean cavern to subterannean cavern they passed, marveling at the weird beauty of the rock formations overhead, and the utterly grotesque shadows cast by the stalagmites, and stalactites on the mirrorlike, cavern walls.

Almost human in contour were a few of the downward-projecting stalactites, hunched and distorted like elves, or skeleton-thin in the eerie glimmering. Higher and higher loomed the stalagmites as the roof formations increased in scope and variety, until the symmetrical rooms of the vast cavern seemed peopled with a thousand monsters of legend competing for the privilege of chilling and awing the tiny human figures that had encroached, unbidden, on their blue-lighted domain.

Deeper and deeper into shadows the five explorers passed, through room after room in a series of vaults that seemed endless, and sloped continuously downward. Like Alpine climbers on the far-off Earth, linked hand in hand, moving slantwise along the glasslike walls and then forward in single procession as new rooms opened out, and more marvels sprang into view.

They were advancing slantwise when the catastrophe occurred. One instant they were standing with their backs to a firm surface, facing a row of towering stalagmites. The next they were hurtling backwards into a blackness that seemed to mutter and sob and moan as it closed about them.

ALMOST it swallowed them up. Their headlights went out, and they hung suspended seemingly without support in a yawning gulf of emptiness.

Then something impalpable seemed to creep around them, and sustain them. They found they could move their limbs, and even shift about in the strange mesh of blackness.

For forty feet in a vertical direction their eyes were a wet shine, and they began calling out to one another.

"O'Hara, O'Hara, can you hear me?"

"I can hear you. Your voice seems to be coming from directly above me, Mac."

"That's good. I can hear you. Are you there, Simpson?"

"That depends on what you mean by there."

"We're all here, O'Hara," came from high up. "We're clinging to something. No, I'd say—dangling."

"I can move around a little," came from the blackness in between O'Hara and the little Scotchman. "Why do you suppose our headlights went out?"

"The cave's probably charged with electrostatic," O'Hara said. "Headlights go off and on in subterranean caverns on Terra. I wish we had nothing more serious than that to worry about."

"That wall must have given way," came from Simpson, the expedition's meteorologist, a small, wiry man with a Scandinavian accent. "We're hanging from something."

"Yeah, something," g r u n t e d geologist Moore, the second from the top. "But what? There's nothing firm within reach. How are we going to climb back out?"

The headlights blazed forth again suddenly, dispelling the darkness, and bringing all five of the explorers into view against a vast iridescent shimmering substance that seemed to fill all space about them.

Three voices cried out simultaneously, making a pattern of terror and awe against the still vastness of that shimmering. Simpson half-swung about in the intangible mesh which sustained him, his jaw hanging open. McFall seemed stunned.

O'Hara's reaction was typical of the man. He stared swiftly about him, stared with a probing intensity, the terror which he had previously felt swallowed up in a curiosity so all-consuming he became for an instant incapable of fear.

On all sides of him, and enmeshing him, and stretching to distant projections of dripping stone, there hung an enormous web, so intricate and shimmering in texture that it dazzled his eyes and made his brain reel.

Behind it there loomed a wide, jagged gap in the cavern wall, and beneath stretched a

series of roofless rooms extending in a straight line downward for hundreds of feet and terminating in a far-off, yawning blackness faintly rimmed with light.

At first the creature was nothing but a weaving blot at the extremity of the web, half-caught in the beam from McFall's headlamp, a monstrous and misshapen blot that seemed to be drawing itself slowly up over the edge of the web toward O'Hara and McFall.

First its eyes came into view, huge, dis-

JOHN CARSTAIRS

tended, and fastened on O'Hara's face. Then its tubular legs and thick, dark body, terrifyingly immense. Finally, a curving, spine-tipped tail which kept up a continuous whirring as it heaved itself up.

"Look out, O'Hara!" Simpson shouted. "For heaven's sake, man, take care!"

O'Hara's curiosity exploded like a punctured bubble, leaving stark terror in its wake. Frantically he plunged about in the impalpable strands which supported him, his hand darting to his hip.

The thing wasn't a spider. It wasn't even insectlike, despite its stinger. It was more like a huge, withered root, with tendril-like legs branching off from it, and eyes like cankers in a tree hole, wrinkled, lichen-encrusted, but gleaming with a voracity O'Hara couldn't mistake.

More swiftly than the scent of enmeshed and dying insects could have propelled a spider on Terra it swept up across the web toward the three nearest men, its forelimbs greedily extended.

McFall's struggles had in them a terrible quality of urgency, but he seemed more concerned for O'Hara than himself. His eyes were riveted on the Irishman's strained face and twisting body, as O'Hara's blastick came sweeping out.

O'Hara fired at almost pointblank range at the bobbing horror. There was a blinding flare of purple light, and the creature bounced to one side, and sagged in the web.

FOR an instant O'Hara thought he had slain it. It dangled as though stunned, its eyes crinkling hideously in its pear-shaped face. Then it righted itself and swept toward him again, its stinger lashing furiously to right and left.

Two more blasticks spurted above O'Hara, but the creature came on with ghastly swayings. It paid no attention to the flaring barrel of O'Hara's weapon a yard from its face. Twice McFall blasted it from directly above O'Hara's head.

The report seemed to shake the web, but the monster wasn't shaken. Its forelimbs went out and around O'Hara, lifting him from the web.

Its stinger curled back.

There was a dull, muffled report. Around the great root-shape a purple glare spread. Behind the glare O'Hara's white face swam into view. His twisting body as well, plunging frantically backward from a suddenly seared and blackened bulk that shuddered convulsively, then sagged in a web of its own spinning that was to become its shroud.

"Ugh, that was close," came from McFall.

The creature rolled over and over in a mesh that gathered about its seared and shriveled body in overlapping folds. O'Hara could see its body through the gathering strands, growing dimmer and dimmer as it descended toward the roofless cavern room below under its own weight.

It finally became a dark smudge in a revolving, and enormous cocoon fifty feet below, still attached to the web by a single thin strand that glowed iridescently in the light from O'Hara's headlamp.

"It took nerve to hold your fire like that," came from geologist Moore. "You rammed the blastick right up against it, eh?"

"Right into its intestinal fortitude," O'Hara grunted, running his sleeve across his brow,

and relaxing a little on the sustaining mesh. "There was an orifice in its stomach. The bastick went right in along with my hand."

"Phew!"

"I thought for a minute we were done for, O'Hara!"

"Yeah, we scored a beautiful, clean miss."

O'Hara was aware of harsh breathing directly above him. He looked up at McFall, and grinned.

"Take it easy, Mac. It was just a native."

The Scotchman's face was drenched with sweat.

"I—I wish I could be sure of that, O'Hara," he muttered, returning his blastick to his hip.

"Huh? What do you mean, Mac?" came from the summit of the web.

"That was the first living thing we've seen here," McFall said. "It looked plantlike to me—a kind of monstrous, animated root. But—well, I'd just about made up my mind I was a mere supernumerary trotting along with this expedition."

O'Hara frowned. Apparently the little Scotchman was taking a roundabout way to hint at something he was reluctant to come to grips with.

"What's on your mind, Mac?" he asked.

"Nothing much. But I'm a botanist, and the funds which made this expedition possible were supplied by the Interplanetary Botanical Gardens. We hoped we'd find at least a primitive flora here. Fauna, too, of course, and something for Moore to get steamed up about. But plant life primarily, if only on a hueless, microscopic level. There is life on Pluto and there is life on the Eleventh Planet. Just because the Twelfth Planet is a Johnny-Come-Lately shouldn't rule out life here."

He shifted his position on the web. "John Carstairs hoped we'd find luxuriant flora. I was with him when he sold the Board of Directors what Tilson, and one or two of the other members, called a bill of goods. I'll admit Tilson's a stuffed shirt, but that doesn't go for the whole board. They argued, and with some justification, that a planet five billion miles from the sun couldn't support life in any form. But you know how eloquent Carstairs can be."

O'HARA nodded. "Yeah, we know. Let's have it, Mac."

"You'd better hear me out first. Tilson was right this time, with a vengeance. Even Pluto has a nitrogenous soil, and enough carbon dioxide in the atmosphere to support primitive spores. This planet hasn't. It's absolutely sterile. There are primitive plant microorganisms, such as the Lunalites, which manufacture nitrogen in a free state from almost sterile soil. But here they couldn't. The soil is completely sterile, and the stalactites hollow chalk formations without a nitrogenous residue."

"Mac, will you get to it!"

"Moore was disappointed, and you can imagine how I felt. No plant life could possibly exist here."

"But you just said—"

"I said it looked plantlike. But I'm willing to go further and concede it actually was a plant. What I can't concede is that the creature is indigenous to the Twelfth Planet. A—a native, as O'Hara would like to believe. No creature so highly evolved, whether plant or animal, could possibly have evolved here."

"But if it isn't a true plant, if it doesn't need mineral nourishment—"

"You gents picked a swell time to discuss evolutionary theory," Simpson cut in. "How are we going to free ourselves? That's what I'd like to know. Not how sterile the soil is, not lovely theories about the primitiveness of Lunalites, not even how much chlorophyll a plant can do without, or whether a plant without chlorophyll would please Carstairs as much as one that was all over green. Nix on that stuff. I'm a simple sort of duffer. I want to know how are we going to free ourselves!"

"Look below you," O'Hara shot back. "It's only a thirty foot drop straight down. That spid—whatever it is, is hanging at a tangent."

"A tangent? That's mathematically impossible. That's absurd."

"The web slopes at different angles," O'Hara pointed out. "If we're careful and we drop straight down, all we'll have to worry about is spraining our ankles."

"If we drop straight down, eh? Just how do you propose to do that? There isn't a break in the web anywhere. Daddy shortlegs saw to that. If you hadn't blasted a hole clean through—good grief! You did blast a hole."

"That's what I mean," O'Hara grunted. "Three or four blasts should do the same for you."

There was a simultaneous rustling as four blasticks again came into view.

McFall's face still looked strained and worried beneath the glare of his headlamp, but he was the first to burn another gaping hole in the web with a purple flare roaring out in the stillness.

He shuddered and paled a little as the blasts echoed through the hollow caverns below.

O'Hara paled too. He was staring straight down through the series of roofless caverns which sloped away beneath him.

The glare of his headlamp illumined the more distant rooms hardly at all, but there were other lights down there, moving slowly up toward him. From the light-rimmed blackness bobbing flares had emerged and

"Wipe them out!" shouted Greer (CHAP. XV)

he could see through at least six of the lowermost rooms, that something was moving up the slope.

For an instant he felt that strange sensation which comes to everyone when something dark can be observed weaving through firelight or the flare of torches. He had to hold on to his nerves when McFall dropped to the cavern floor below, his small, stooped figure silhouetted against the distant, bobbing lights.

Then, far down amidst the glow, he saw a figure that wasn't stooped. A tall figure with snow-white hair walking a little ahead of the something, his shoulders erect and a massive weapon in the crook of his arm, while on both sides of him the glow leapt, and shapes small and dark and shrunken accompanied him upward, moving on blocky legs and carrying argon torches.

CHAPTER I

Calling John Carstairs

WHEN John Carstairs entered his office at the Interplanetary Botanical Gardens, there was a call for him. His secretary, her red-gold hair aureoled by radiance from the high windows behind her, pushed the visiphone toward him across her enormous desk.

"You'd better dial Mu six—seven, five, three, nine, John," she said, crisply. "A girl with the kind of voice you like to hear wants you to call her back. She says it's urgent."

Vera Dorn was accustomed to indignant glances when she gave her tall, boyish-looking employer advice. But now she winced a little, because the youthful curator of the largest botanical exhibit in the Solar System hadn't slept well, and was feeling sorry for himself.

The glance he turned on her should have melted down a twelve-foot non-volitional robot to the dimensions of a watch charm. But Carstairs' secretary was no robot.

With a shrug she turned away, and went right on cataloging rare, frondlike perambulating plants from Neptune's frozen satellite.

Carstairs emitted a snort, grabbed the visiphone, and rotated the exchange dial, his craggy features haggard from lack of sleep.

"It sounded like a dizzy blonde to me," Vera said.

"How could you tell, just from her voice?" Carstairs asked.

"Oh, I could tell. She didn't even bother to send her image through when I told her you were out. That's downright insulting, you know. A brunette or a redhead would have tried to get on the good side of me. But a blonde?" Vera shrugged. "She knows your weakness, apparently."

"The next time I drop down to headquarters I'll take you along," Carstairs snapped. "With talents like that you should be drawing down two hundred a week—as the toughest cop on the force."

"Hmmm," Vera mused, pushing her lips out. "Lieutenant of Detectives Dorn, eh?"

"On Homicide," Carstairs stressed.

"Well—why not? A botanical sleuth like you, who knows all the angles, should be able to get his little sidekick something really gruesome to work on, like—that poor little corpse who turned into a seven foot giant when you dusted him over with puffout spores from Callisto instead of the moulage mold you intended to slap on him. How didja ever happen to be guilty of such a mistake?"

"Did you make that one up out of whole cloth, or use just a patch of something you heard?"

"Okay, I was pulling your leg," Vera purred. "But seriously, John, I've been thinking. Wouldn't it be fun to wake up some morning and find you'd turned into a corpse? You could investigate your own murder—with my help, of course."

Carstairs writhed inwardly. He disliked being badgered about what he did with his free time, especially by Vera Dorn. His attractive secretary-assistant just hadn't enough breath of vision to appreciate the importance of scientific crime detection as a stabilizing force in the seething, turbulent unrest which menaced the entire Twenty-first Century civilization.

Having majored in botany at a blue-stocking university in the Middle West and having had all of her more expansive emotions squelched by academic amazons in cello-slacks, she was incapable of sympathizing with Carstairs' need of applying his talents in a practical way to the world about him. Research botany wasn't a dull field, exactly, but a man had to have ice in his veins to remain a dyed-in-the-wool curator when horizons of exciting events started opening out before him.

Carstairs had always been tremendously interested in scientific crime detection, and his old friend Inspector McGuire really needed him. Most of the men who worked under that iron-jawed, keen-minded old police officer employed outmoded methods. Using the peculiar properties of plants from Mercury, Venus, Mars and the great outer planets as laboratory aids in the investigation of homicide just hadn't occurred to them until Carstairs had demonstrated his ability and specialized knowledge by bringing some of the

most dangerous criminals in the System to book.

"John—John Carstairs!" came suddenly from the visiphone.

The screen of the instrument had brimmed with light, but the voice of the speaker preceded her image by the barest instant.

"Oh, thank heavens, John! I thought you'd never call me!"

"Well, I like that!" Vera grunted, but Carstairs scarcely heard her.

He was staring at the face which was coming slowly into view above the mouthpiece. It was the face of a slender, dark-eyed girl of perhaps eighteen, her lips slightly parted, her jet black tresses, cut close to her head, and encircled by a narrow band of platinum.

HER eyes were alarmed, yet at the same time relieved, as though just calling Carstairs had allayed her new-born fear.

The last time Carstairs had seen Helen Hilary she had been in pigtails. She wasn't in pigtails now. She had grown up and with startling results. Now her loveliness made Carstairs catch his breath and brought a momentary glint of apprehension to Vera's narrowed eyes.

"I just came in," Carstairs heard himself saying. "What is it, Helen? Vera said someone called me."

"John, I must see you at once. Father's locked himself in his study, and he won't—he won't answer me. When I call him, John, he won't come out, either. I'm frightened."

Her lips twitched, and for a moment her face looked to Carstairs like an empty mask staring vacantly from the visidisk.

Vera's expression softened. She moved closer to the phone, spoke into it.

"Has he been ill? You ought to send for a physician if you think it's necessary."

"No, no, it isn't that. I can hear him moving around. He's been—horribly upset."

Vera turned to Carstairs and nodded. "Perhaps you'd better go over, John."

Somehow Carstairs was glad that Vera had made the decision for him.

"I'll be right over," he promised, not feeling up to saying anything more.

In a way, he was bound to help her because of his obligations to Thomas Hilary. He could see at once that was so. The relief that came into the girl's eyes showed she was aware of his debt to Hilary.

The opalescent visidisk dimmed, went blank.

"I'll phone back if it's anything serious," Carstairs promised, moving closer to his secretary. Her breath fanned his cheeks.

Suddenly she was in his arms.

"Good girl," he said.

"I wouldn't have weakened, John, if she'd been a blonde!"

Five minutes later Carstairs went striding across the grounds of the Interplanetary Gardens with a strange look in his eyes. He no longer felt tired and sorry for himself. Vera Dorn had, for the moment, ceased to be a blue-stocking secretary with a chip on her shoulder.

It amazed him every time it happened. Hard and cynical and cold she was—until he took her into his arms, and unfathomable glints came into her soft blue eyes.

He hoped when he married her she'd stop surprising him, and be like that every waking hour until the frosts came and he was semi-retired. She'd promised to be like that for the next four days anyway. Right after he'd smoothed out the little ringlets at the nape of her neck, and whispered things to her which had convinced her she was the only girl in the world for him. The glow he'd brought to her eyes would remain for a while.

He'd phoned the attendant in the East Gate parking lot from the Administration Building—phoned him to wheel out his small, black, private gyro in readiness for a take-off. In a moment or two he caught sight of the little machine standing in waning sunlight on a sloping lawn between the Marine Stove, and the fourteen smaller greenhouses which made the Gardens the most imposing scientific exhibit on Earth.

The attendant usually took his time, but this time he had hurried, impressed by the urgency in Carstairs' voice. Helen Hilary's call had upset Carstairs even more than he'd suspected.

Swiftly he attached steel clips to his trousers, pulled a pair of sun goggles down over his brow, climbed up over the fuselage of the plane, and settled himself in the pilot seat.

He pulled the stick sharply toward him.

The plane rose slowly for two hundred feet, and hung for an instant stationary over the glowing golden domes, black pylons and level lawns of Carstairs' far-flung domain.

In a very real sense it was Carstairs' domain which stretched below, because his energies and genius had made possible the slow but steady expansion of the exhibit area year after year until it now ran parallel on one side with the gleaming bright waters of Long Island Sound and on the other with the New York Inter-Suburban Monorail. Between the Sound and the Monorail stretched two square miles of pure John Carstairs.

It was his domain, even though to the Directors he was just a brilliant young chap who had wrested a high-paying sinecure for himself from an endowment fund which was unquestionably too elastic.

As Carstairs turned the gyro into the sunset, he mentally removed the roofs from several of the great hothouses while his mind went back ten years.

THE Marine Stove had been crowded with men, women and children. The children were mostly interested in something octopuslike and enormous in a tank filled with green water on the second tier down from the roof. A little girl in pigtails was staring at it, and it was glaring right back.

The octopus creature came from the somber seas of Saturn—from enormous, iridescent caverns "measureless to man." But to the little girl it was just an "Ijjit." It wallowed in the mud at the bottom of the tank. It had eight eyes. It was huge and bloated and repulsive.

But it fascinated the little girl more than anything in the whole exhibit. Even more than the pipeline plants from Neptune in the tank to the left of it, and the great, pulsing fern-jellies in the tank to the right.

Down on the tier below were myriads of other fascinating creatures. Marine leechweeds from the Ringed Planet, umbrella ferns from two of its ten satellites, asteroidal kling swimmers, little floating jelly blobs from Callisto, decked out with oarlike appendages, frail fungous growths that pulsed with all the colors of the spectrum, jack-knife bottom-swimmers from the tidal estuaries of Europa, which propelled themselves through the water by snapping shut and open.

But the little girl was only interested in the Ijjit.

Her name was Helen Hilary, and she was nine years old.

CHAPTER II

Hilary's Ghastly Plants

CARSTAIRS' thoughts changed to another scene. It held his attention so closely he barely glanced at the Stove where formidable perambulating plants shook and waved their tentacles above beds of peat compost and flaxed graphite. Once more he was engrossed in memories as he guided the gyro skyward.

Helen Hilary was now twelve, and alone with her aunt in a little white cottage somewhere in Maine. She was a serious little girl and had outgrown dolls for so many years that she was as bored as Carstairs would have been without his crime work to keep him keyed up.

"It's all John Carstairs' fault," he could hear her saying. "I'm not so young he can pull the wool over my eyes. He said Father would be coming back in six months. But I know what's happened. Father is doing the work of five men in the Pluto field. The man who's making him work so hard is John Carstairs."

That hadn't been true at all. But Carstairs had never been one to argue with children, particularly stubborn little girls in long, blue-black pigtails.

Another scene came to his mind. He and Hilary beneath the towering, corrugated hull of the Silvery Wayfarer, with the crater-pitted soil of the Plutonian tundra a blue glimmering in the piercing glare of their headbeams.

He hadn't seen the translucent Anabis until its towering bulk had dimmed a little the wider beams from the expedition ship's gravity ports. It had crept up behind him so noiselessly that he was enveloped in its smothering unicellular immensity before he could cry out, or whip out his blastick.

It was a thousand times worse than drowning, because the Anabis was all tiny, sucking mouths and clinging wetness. Over his face a vampirish surface passed and hideously indented itself, and it was useless to struggle because the creature had wrapped itself too tightly about his limbs.

The pressure of the creature had been vise-like, pure torture. But even more ghastly the pulling on his eyeballs, the feeling that he was about to lose them. The Anabis could suck a man's eye sockets dry in a matter of seconds, and that one almost had.

Nothing but a blast at almost pointblank range from Hilary's weapon could have saved him.

Hilary had acted. The blast had come just in time, searing him all down one side of his body, ripping away his space-suit and leaving him almost naked in a blackened, charred mass of jelly.

He had evened up the score on the home lap. In the Zone of the Asteroids the Silvery Wayfarer had a soot-encrusted figure clinging to one of its stern gravity plates for a full minute in the void.

The figure had been Hilary. He had gone down into the rocket chamber to recap a damaged tube, and dropped out through it into the void. It was not Hilary's fault. The suction from even a non-functioning tube at times could be irresistible.

Carstairs had followed him. He'd crawled along the corrugated gravity plate, and pulled Hilary back inside.

Carstairs had always wondered why you can't save a man's life without feeling that you're indebted to him.

That awful half minute in the black night of space had given Carstairs something he valued much more than his life. He felt grateful to Hilary for going out, and glad that he'd been able to put himself to that kind of test.

Hilary had handed in his resignation when his daughter was fourteen.

"I've got enough to retire on, John, and

my kid hasn't been getting the attention she rates from her father. I've traveled too far too fast these last ten years. I'd like to be remembered by the rest of the party as one of the ablest men in the Pluto field, if that isn't bragging too much. I'm rather vain about my exploring and collecting record, John. Beyond that I'm just a tired old man."

Hilary had retired at fifty-three, too young an age to throw in the towel, although in his case, he had continued to devote all of his time to research work in his chosen field.

During the last few months a change had come over him. Carstairs had noticed it when he dropped in at the Gardens, and compared what he'd accomplished with the work of men still active in the field.

TOM HILARY had some curious theories he'd worked out in the quietness of his study up in Third Level Yonkers. Those theories seemed to indicate Hilary brooded overmuch.

His ideas made Carstairs wonder whether an active and successful field man shouldn't think twice before becoming an armchair botanist at so early an age.

Mutations had absorbed Hilary's attention to the exclusion of all else, and he'd become almost belligerent when Carstairs denied the possibility of cross-breeding the more intelligent plants.

Carstairs had tried. For eight tedious years, the slow, patient way, by root graftings and cross-fertilization over a thousand generations of spores, Carstairs' experiments had continued.

The results had been negative—so completely negative that Carstairs had despaired of ever producing a hybrid with the intelligence of a four-year-old child.

There were only seven intelligent plants in the Solar System, and Carstairs had abandoned all hope of artificially creating an eighth or a ninth.

The seven intelligent plants were less intelligent than the great apes—with the possible exception of the carbon-eating diamond plant from Uranus. Carstairs had once possessed a specimen of that plant, and it had killed a dozen men very gruesomely, so that he had been compelled to anaesthetize and destroy it.

It had been capable of forming concepts and throwing curious, budlike growths at its enemies, "thinking caps" which gave them fantastic dreams. On Earth people had been its enemies.

Carstairs shuddered a little in the vibrating gyro, recalling his frightful struggle with

Carstairs sprang past Vera, trying to shove back the faces (CHAP. XII)

that ghastly plant monstrosity when it had crawled into a pit of liquid carbon on Third Level Manhattan, and waxed loathesomely huge. He had gone in after it, carrying a tin of ether, with Vera at his side. Together they had turned it into a flabby, sagging horror.

He'd killed it three days later. He'd never obtained another specimen, hadn't wanted to. It had been even more hideous in some respects than the little dragon-lizard plant that could scent down criminals when you sprayed the right kind of chemicals on it. Snapdragon was one of the seven—about as intelligent as a lemur.

Then there had been that ghastly root-thing that had murdered a man. It had been taught to do so, however. Painstakingly it had been conditioned to slay by a depraved arch-criminal who had once been a distinguished scientist. It had displayed the characteristics of Miryachit, a peculiar oriental disease in which the victim mimics everything done by another. The criminal had made wax images of its victims, and taught the plant to slay by going through the motions himself. On its own initiative the creature wouldn't have harmed a fly.

Yet—all those intelligent plants had displayed malignant tendencies, or left destruction in their wake. There was something chilling, sinister, about a plant that could think. What emotions might not such a plant be capable of, with its vampirish instincts?

Were not all plants vampirish, compelled to suck up nourishment from the soil, to cling and batten as free-moving animals were not compelled to do? Was there not something a little terrifying about the thought of a growing thing acquiring more knowledge with every added bud, or added leaf?

Thomas Hilary hadn't thought so. He'd stuck to his guns, insisting that the seven known intelligent plants would bear about the same relation to his hypothetical mutants and hybrids as the Java ape man, or Piltdown to the modern homo sapiens. He was sure that Carstairs hadn't tried hard enough.

He became belligerent about it when Carstairs pressed him, but also disturbingly evasive. He seemed reluctant to discuss his curious experiments. Some of them had evolved grafting on a much more extensive scale than Carstairs had approved.

Hilary had produced complicated interweavings of ten or more varieties of the Erasmus weed, a curious, pallid Neptunian growth with a brain cup six inches in width, and a dwarfed echo fern from Io. The weed was perhaps as intelligent as a six months old human infant. The echo fern threw back human speech with slight variations—probably a tropism.

The resultant hybrid had been a monstrous thing, with a brain cup eighteen inches in width, and a sounding membrane so resonant it could throw back the sound, enormously magnified, of a pin dropping.

The brain cup was filled with a clear, translucent jelly instead of the complex-veined hydrogen carbon compound which filled the brain cups of Erasmus weeds that hadn't been tampered with. Theoretically it should have had no intelligence at all. Actually it was capable of a few sluggish responses. But it had lost its capacity to reproduce variations of human speech. It was a perfect sounding board—nothing more.

HILARY had tried for mutations by bombarding the spores of the same growths with hard rays and soft. He had produced changes in physical structure more bewildering than the fruit fly monstrosities which had astonished the scientists of an earlier day. He had produced nothing else.

The gyro was now circling over the bright, gleaming waters of Long Island Sound. Red sunlight glistened on the black pylon-shaped Marine Stove, and small white and red sails a mile from shore.

The survival capacity of sailboats amazed Carstairs. For two hundred years there'd been no change in them, even in the cut of their jibs. Men would never let go of sailboats because they symbolized something basic in the race, the joy of overcoming sudden hazards, freedom, and high courage breasting the unknown.

His altimeter soared as he turned the little plane northward. Faint wisps of cloud collected directly above him, thickened and became pale pink puffballs rolling across the sky.

He rose higher, and the puffballs swept beneath him and became a massed rosiness blocking out the sound.

CHAPTER III

"Father's Been Hurt"

CARSTAIRS was shivering a little when the spear-shaped tip of lower Third Level Manhattan came into view. Wisps of smoke were arising from the enormous power turbines which fringed the southern extremity of the long city, and the four hundred foot heliographic signal tower in New Battery Park was flashing intermittent messages to ships and planes a thousand miles at sea.

He descended a thousand feet, and passed at a low altitude over the tapering metropolis. On both sides of him a long line of Gargantuan transport planes were passing

southward and out over the upper harbor. In the slowly gathering dusk they looked not unlike a flight of pterodactyls glimpsed through a haze of stupendous magnifying power.

Over upper Manhattan he soared, past the sun-reddened waters of the Spuyten Duyvil Creek, and across the two-level flatness of the Bronx. Lights were winking on in the twenty thousand glass-roofed cooperatives of the upper residential tier, as three million busy housewives swung into their nightly routine of prying the lids off Automat slots, and removing full-course dinners from soup to dessert, neatly wrapped in vacuumite.

The Bronx receded in a rosy glimmering as he turned the gyro westward. Straight into the sunset he flew, the struts of the little plane vibrating like the wings of a darning fly swooping down upon a reed.

The reed was the straight black shaft of the Yonkers spaceport, a monumental finger piercing the glow. He reversed the stick suddenly, and swooped down toward it, his gaze traveling out across the entire squat bulk of Yonkers and over the North River to the Palisades.

Hilary lived in a rambling, twentieth century house in the old residential district on the lowermost tier. For six hundred feet straight down past the two upper tiers at the northern extremity of the city the gyro swooped, its horizontal propeller carrying it forward until it almost brushed the projecting cooperatives on the third tier and then backward until Carstairs could see deep into the green glimmering which was the residential parklands of the second.

He flew at an altitude of three hundred feet into the lower city, his "ceiling" strictly limited. Above him arched enormous girders and a corrugated expanse of metal gleaming dully in the indirect lighting which flooded the old residential district like some modern, luminous solvent dispelling a widespread mustiness in an old pewter mug.

Five minutes later Carstairs was climbing down from the plane beneath the overhanging branches of gnarled and enormous trees. Hilary's big, rambling house would have been called a mansion in the early years of the Twentieth Century. It was surrounded by a patch of woodland and a crumbling stone fence, and was as unlike the cooperatives eight hundred feet above as any ancient survival could be, and escape condemnation proceedings.

The rents in the old residential district were surprisingly low, however, and it wasn't difficult to understand why Hilary should have selected such a retreat, along with twenty thousand toiling scholars, struggling young artists, and musicians, wealthy eccentrics, antiquarians, and certain furtive, shifty-eyed individuals with no visible means of support.

Carstairs descended to the ground, ripped off his sun goggles and headed for the house, his long shadow preceding him over the weed-choked lawn. He felt a profound uneasiness creeping up inside him. The roar of the descending plane hadn't drawn anyone from the house, and there was a stillness in the leafy branches overhead, as though something ominous had silenced even the chirp of the katydids he had heard, for an instant, right after the plane had stopped vibrating.

His uneasiness increased when the sagging stoop of the house came into view, and he saw that no one was waiting for him in the wide old-style doorway.

Swiftly he ascended, ringing the old-fashioned doorbell, jerking and tugging at it, and listening with a catch in his throat while its echoes went pealing through the house.

Suddenly the door opened, and Helen Hilary was standing there, her face deathly white, one hand pressed to her throat.

"John, something's happened—father's been hurt! I heard him groaning! I heard a thud, a heavy thud, like a body falling. He must have upset the table, or else—there was someone with him in the library. I've been pounding on the door, but he won't answer."

Carstairs put one arm about her shoulder, drew her into the shadowed lower hall, and kicked the door shut behind him.

"You'd better stay here for a moment, Helen. I'm going to go in there and break the door down. Now don't worry—it may not be anything. He may open the door if I ask him to. If he doesn't, we'll get to him."

HELEN didn't answer. Instead she just looked at him, and grew paler than ever as she sagged against the wall. He turned away and walked toward the study. It never occurred to him she would follow, but she did—tottering after him.

Hilary's study was the third room on the right at the end of a long hallway. Carstairs had visited the rambling old dwelling twice, and was familiar with the groundfloor arrangement. In fact, he'd sat up till dawn in the study a fortnight previously, arguing with Hilary until the latter's blood pressure had begun to rise. Then, rather than quarrel with his old friend, Carstairs had stalked down the long hall and out on the lawn with an angry glint in his eyes.

Helen had returned from Maine the next day, to keep house for her father, and spread balm on his tortured nerves.

Apparently she hadn't succeeded.

Carstairs hoped that what he'd been dreading hadn't happened. He hoped it hadn't, but Hilary had been acting mighty peculiar for quite a while now, and it was possible he

might have done something to himself. A man could ride a theory too long and too hard.

The hall seemed longer than usual, Carstairs thought. He felt he'd never get to the end of it.

A breeze was blowing in at the end, belling out the heavy celloflex curtains of a window that framed skeleton tree limbs against a dull red sky. Turning abruptly, Carstairs grasped the knob of the round door on his right, and tugged at it, knocking thunderously as he did so.

"Tom!" he called loudly. "Tom, answer me."

But from the study, beyond the heavy circular door, there came no response. He continued to pound vainly for several more minutes.

He realized then he would have to break into the room, and it would be a tough job. As he stepped back he heard someone breathing at his elbow and turned to discover that Helen had followed him. She was standing close by, as if for protection, and her eyes were filled with terror.

"You see?" she whispered. "He doesn't answer. There is something wrong, John. I know it. That's why I called you."

Before Carstairs could reply the celloflex curtains rustled behind him. At first he thought a gust of wind had blown the curtains toward him but an involuntary instinct of impending danger made him reach for the girl and snatch her to one side. Undoubtedly his prompt action saved her life.

Something whipped past his head and crashed against the door, bursting the lock from its fastenings. An inferno of smoke and red flame roared through the hall. Through the sagging door of the study Carstairs caught a glimpse of the blossoms of one of those weird potted plants which Hilary kept in the room as decorations. Then he reached for his atom pistol as he supported Helen—who had sagged, half-fainting, against him—with his other arm.

From the window a second explosion almost shattered his eardrums. He dropped to his knees, let go of Helen, and crawled toward the window. Two more shots roared over his head.

Through a smothering curtain of blackness he could see the shine of a blastick pointing downward. Someone with a very considerable sense of appropriateness was using an explorer's weapon instead of an atomatic pistol in an attempt to burn him down.

He'd never liked crawling on his knees to grapple with a killer. He rose suddenly, leaping toward the window almost effortlessly, risking the raging, sideward sweep of a fourth blast that just missed carrying away the entire top of his skull.

A vague, shapeless form dropped down from the window as Carstairs leaped through. It went zigzagging across the rear lawn, the blastick bobbing in its clasp. Into a tangle of fallen branches, and waist-high weeds it plunged, a thin spiral of blue smoke marking its progress as it fled through the dark patch of woodland beyond.

Across the lawn and into the woods Carstairs raced in furious pursuit, his face chalk-white, a prickle of pain in his scalp. The sun had set, and it was so dark between the trees that he could barely see the maze of prickly underbrush that tore at his clothes, and kept threatening to lay him by the heels.

He stopped abruptly, before a barrier of vegetation too dense to permit of further swift progress, shook his head as though to clear it, and—decided against a further hunt at this time.

Making his way back to the house, he told himself that the thing couldn't have been human. He had caught only a glimpse of it, but the squat ugliness of its contours had left an ineffaceable impression of something monstrous and deformed, certainly no larger than a dwarf, and probably ten times as agile.

WHEN he climbed back through the window, Helen Hilary was standing where he had left her. She was still terror stricken.

"I've been so worried, John," she faltered. "You aren't hurt?"

"No."

Carstairs walked over to her. She gripped his hand nervously, with cold fingers.

"The would-be killer escaped in the bushes," he explained.

He didn't tell her the creature he had chased hadn't looked like a man. She was trembling and there was silence in the room where her father was. Hilary hadn't come out to ask about the shooting. She hadn't been able to get in to him, either, because the ruins of the heavy door still blocked passage into the room.

Despite her reluctance to leave, Carstairs led her back along the hall to the front of the house.

"You better stay here till I've cleared away the ruined door and made an investigation," he said.

"You don't want me to see something horrible, is that it?"

Carstairs did not answer that. He just patted her arm and walked back to her father's study.

He put his shoulder to the door and heaved. There was a splintering crash. Something metallic inside clattered to the floor inside and the door groaned and burst wide open.

The study smelled of dampness and vegetable rot. There was a splintered herbarium on the floor, and from it something gray and

shapeless had oozed out over Thomas Hilary's outstretched right arm.

It was so dark in the study that Carstairs could barely see Hilary's hideously distorted figure lying on the floor just inside the doorway. It was obvious Hilary was dead.

He was lying on his side, with one arm outstretched, the other doubled up under him. His glasses had been jogged from his nose and lay a foot from his face, and there was no possibility he'd ever be needing them again.

Most of his head had been bashed in, and there was a deep ugly gash on his right cheek, extending diagonally from his temple to his throat. Even more than the crushed skull the sight of it sickened Carstairs.

For an instant he stood transfixed, staring downward, with thudding heart and a mouth as dry as death. Then he stooped, took a firm grip on the dead man, and turned him over. Hilary's left cheek was disfigured too, as though he'd been attacked with brutal violence by someone insane with rage.

Carstairs straightened up.

"Poor Helen," he muttered. "I hope she won't take this too hard."

A moment later he'd blocked the entrance with the ruined door, and was moving down the hall to where he'd left her. Carstairs didn't like the task which confronted him now, telling her what had happened to her father.

CHAPTER IV

The Murder Molds

RIGIDLY Jerry Solury and Fred Ellet, newsfilm men from rival syndicates, stood a little apart from a group of their fellow reporters on the weed-choked lawn of Hilary's old, rambling house, police cards projecting from their cello-lux snapbrims, their foreheads studded with sweat.

"It's hot, ain't it?" Ellet complained.

"I'll say. Got a cigarette?"

"Yeah, here."

"Thanks. Those moulage mold auras are plenty gruesome, eh?"

"I'll say. I've been looking at them for two years now, but they always give me the willies. It's like seeing somebody being killed from a dozen different angles, and not being able to do anything about it."

"A dozen angles! There are thirty molds in there. One half of thirty is fifteen."

"You mean there were thirty. A dumb policeman stumbled against four of 'em, and they crumbled. Didn't you see it?"

"Naw, I had to come out for air."

"You mean you were tossed out. You must have been one of those gate-crashing babies being helped out when McGuire let me in."

"Well, what if I was? I helped myself to an eyeful."

"I'll bet you did. There's a redhead in there I would go for. Her ankles are swell."

"You'd better watch your step, buddy. She's Carstairs' secretary. You want him to make a moulage mold of you and him deciding you're not the right lad for her."

"Yeah, that Carstairs must pack a wallop. He's built like a young Texas cyclone."

"A wallop isn't all he packs. He knows everything there is to know about crime since it was invented. Those moulage mold auras are just a sample."

"I never quite understood about those auras. How does the mold affect them?"

"Molds. There are billions of them. Don't you read the Popular Scientific Weekly?"

"Yeah, but if you miss one week, where are you?"

"You missed the Mimas mold article, eh? Well, maybe I can sum it up for you."

"Swell, if you can keep it simple. I'm not running such a high I.Q. this morning."

[*Turn page*]

"Well, I guess you know we all give off infra-radiant impressions when we move around. There are billions of tiny, radiating suns in our body cells and they keep sending out radiant auras. If we stand in one spot for any length of time, or if we strenuously exert ourselves, we leave auras so strong they can be measured by an instrument called the Keith Detector. Not only our bodies, but anything that has been in contact with any part of us gives off an aura which lingers in the air for several hours. Right where we've been standing, or moving about—"

"Even our clothes, our fingernails?"

"Yeah, even our clothes soak up a little of the radiance. The infra-radiant energies of protoplasm, generated by all those billions of tiny, invisible suns. Grille discovered the suns back in the early years of the last century, but it's only recently we've been able to detect the auras."

"But where does the mold come in?"

"Well, the Mimas mold feasts on infra-radiant energies. It fastens on the auras and devours them. The auras are invisible, you understand. We can't see them because they're infra-radiant. But when the Mimas mold fastens on those tenuous impressions it brings them into view.

"It's really the mold we see, not the aura. The mold gives the invisible auras a cheesy consistency. It fills them out. The Mimas mold is like glue poured into a cell with invisible walls. It brings the cell into view."

"Into view—and you get visible 'body prints' of your murderer, right down to his fingernails. Clothed, three-dimensional impressions of him in the act of blasting his victim. Or bludgeoning him. Great exertion produces even stronger auras than the ones that form when you stand stock still for five or six minutes, or lie still. There are auras in there of Hilary lying dead, because the suns continue to radiate for several hours after death, and Carstairs moved the body before he notified the police."

ELLET shuddered. "The body continues to radiate until rigor mortis sets in, eh?"

"No, it has nothing to do with rigor, or the cooling of the body. The vital energies of protoplasm, Crille's suns simply do not instantly go out at the moment of death. It takes weeks for some of the cells of the human body to die."

"It does, eh? Could you get a Mimas mold impression from a month-old cadaver?"

"Possibly a very faint, imperfect one. All Mimas impressions,* or moulage mold impressions, as Carstairs calls them in that article in the P.S.W. you didn't read, aren't perfect. A killer who doesn't believe in waste motions, who's cool and efficient, might slay without exerting himself. In that case you'd get a blurred impression, or none at all."

"That's interesting."

Solury smiled grimly, and nodded toward the rambling, old house.

"That one wasn't cool."

"I'll say. Fifteen impressions, and all of them sharp."

"Do you suppose they'll identify him?"

"Why shouldn't they. The I.B.I. will simply compare those impressions of him with photographs in their files."

"But if he isn't in their files?"

"With a face like that? Don't make me laugh."

A police officer in uniform appeared suddenly on the porch across which the newsfilm men had trooped a quarter hour previously, only to undergo a disapointment.

"All right," he called. "You boys can come in now."

Ellet grunted cynically, crushed out his cigarette on his flat metal filmo-recorder, and rejoined his fellow reporters. The group of sullen newsmen mounted the porch, and in single file entered the house.

Four of them had crashed in earlier and all were disgruntled at having been kept waiting. The four who had been ejected were nursing bruised egos.

Ellet was the first to reach the door of Hilary's study.

McGuire had posted a plainclothes man at the end of the hall, another directly before the door.

The door opened, and the Inspector's square-jawed face came into view.

"You boys will have to go back outside," he said. "I thought I'd have a statement for you, but we're not through here yet. Sorry, boys. Come back in fifteen minutes."

The door closed.

The plainclothes man who was facing Ellet winked.

"Carstairs is just swinging into his stride," he said.

Ellet gnawed at his underlip, stared at the closed portal. He had never wanted so much to possess X-ray vision.

Could Ellet have seen through the door an extraordinary sight would have met his eyes.

In the big, book-lined room beyond, lighted now by cold lamps from a dozen angles, five men and a woman were grouped.

Vera Dorn was standing by Carstairs' side, very still in the blue glare. Behind her through the broad study windows loomed a

* For a more detailed description of the Mimas "moulage" mold, and Carstairs' prediction as to its importance as a revolutionary crime detection aid see "The Satellite of Peril," published in Thrilling Wonder Stories, August 1942.

leaden sky, and the interlacing branches of denuded trees.

Inspector McGuire was leaning against the library table, his square Irish jaw outthrust almost belligerently, his short, stocky figure dwarfed by the tall, quiet forms of two police officers in uniform. A filmprint man completed the roll of persons present. He was waiting by the door, his eyes trained on Carstairs' white face.

There were other figures present, but they were human only in appearance and there was that about them which would have chilled and terrified anyone who had never seen a Mimas mold aura.

All over the big, brightly-illumined room they stood in attitudes distorted and ghastly, now facing one another, now bending and grappling furiously, their features hideously convulsed.

Eight of the auras were those of Thomas Hilary, the rest the waxlike images of the man who had bludgeoned him to death.

The murderer was a big brute with a heavy-featured face, massive shoulders and thick gray eyebrows that met above the bridge of his nose. There were folds of skin over his lips, and his eyes had a glary look.

From the fifteen three-dimensional auras, a few blurred and imperfect, it was possible to construct a complete picture of the crime that had been committed in Hilary's study twelve hours previously.

There was an aura of Hilary standing behind his desk, his features taut, facing the brute. There was aura of Hilary moving out from the desk, and of the big man drawing forth the murder weapon—a twelve-inch length of metal pipe.

There were molds of Hilary and the murderer struggling. There were molds of Hilary sagging, of the other drawing his arm back. There were molds of Hilary lying prone, and—a very gruesome aura of Hilary stiffening in death beside the crumpled Hilary that Carstairs had first found.

CARSTAIRS had moved that crumpled, pitiful Hilary, and the tiny suns in their body cells had sent out more emanations to build up still a fainter aura a few inches away.

There was an aura of the killer returning the bludgeon to his hip, and even one of him crouching in the window behind Vera Dorn, Mimas-molded, in the act of climbing out.

McGuire was doing most of the talking, his expression incredulous and a little on the belligerent side.

"Carstairs, in something less than ten seconds I'm going to call those lads in, and give them what we've got. I don't like to hold out on the filmpress. Are we waiting for something more to happen?"

"We are," Carstairs said, quietly.

"Huh? What was that, Carstairs?"

"I said we're waiting for something else to happen. I don't know whether it will or not. Those molds are better than a signed confession, but signed confessions aren't as good as spoken ones in the presence of reliable witnesses. A good defense attorney can tear a written confession to pieces, and—the same goes for moulage molds."

"I don't get it, Carstairs. Moulage mold evidence has never been challenged. Not since you started spraying Mimas spores all over our filmprint men."

"But it could be. There is no tableau here showing the murderer bringing the weapon down on his victim's skull. There is, of course, proof presumptive that an act of violence was committed here—the strongest sort of circumstantial evidence. We have Hilary sagging, and the murderer drawing his arm back. But I shudder to think what a clever attorney could do with what we haven't got."

"You mean we've got to have more than this?"

Carstairs nodded. "A complete chain of circumstantial links, McGuire. We're not living in the Twentieth Century. We know now that the most impossible coincidences are of everyday occurrence, that the law of averages as the Twentieth Century conceived it just doesn't exist. The probability cycle is too enormous. Any small segment of it provides just enough freak contingencies to make an incomplete chain inadmissible as evidence."

"You mean to say the defense would have the nerve to claim someone else struck Hilary down?"

"Why not? The court would uphold him. Someone too cool to leave a moulage mold. He crept in here, pushed that big brute's arm aside and let go with a weapon all his own.

"Carstairs, you can't believe that!" McGuire blurted.

"Of course not. But no one has to believe it. What I'm saying is that, by the laws of evidence, it couldn't be ruled out."

Carstairs was looking at his wrist-watch.

"You'll have to catch him before you can convict him. Hearing him convict himself out of his own mouth would certainly help. We'd know more about him if we knew why he came here to kill Hilary and what Hilary said to him."

"Out of his own mouth! Good gosh, Carstairs, how is that possible?"

"I've made up my mind!" a voice rang out suddenly from behind Hilary's desk. "I'm turning all this evidence over to the police. You'd better not try to stop me!"

"What evidence?" came from the big aura facing the desk. "You made some experi-

ments with plants, that's all. You couldn't have made them without the money we sent you. You needed our money and we needed you. Now we no longer need you."

"I have letters. Proof."

"Oh. You've letters, proof?"

"I'll not stand by and see such a shadow blot out the sunlight for millions. A brutal, ruthless—civilization ruled by a devil."

"It shouldn't worry you," came from a big aura drawing forth the murder weapon. "He's five billion miles from Earth."

"He'll return to Earth," came from a Hilary in front of the desk, facing his shadowy enemy. "He'll return."

There was a sudden, terrible groan from a Hilary sinking down.

McGuire's face had gone dead white.

"You made those auras speak!" he quavered.

Carstairs nodded.

"Yes, I made them speak. There's your evidence, McGuire. He's convicted himself."

BEFORE McGuire could reply the auras spoke again.

"Surprised to see me, Mr. Hilary?" came suddenly from the figure in front of the desk.

"No, I've been expecting—something like this."

"Stop, no—" rang out from an imperfect mold of Hilary reeling back.

"He wouldn't like to hear you—call him that," came from the big figure drawing his arm back. "He'll be the most powerful man in the world when he has perfected his plans."

"Powerful—a dictator—brutal, ruthless—he'll—"

Another groan came from Hilary sagging, but this time it was followed by a low throaty chuckle.

"Good heavens!" McGuire cried, aghast.

Vera was staring at Carstairs, her eyes wide with surprise.

"When we speak, every movement of our vocal cords leaves a faint impression," Carstairs said, his eyes on McGuire's sagging jaw. "In the throats of every one of those molds there are hundreds of voice patterns—but so faint and imperfect the original strain of Mimas mold turned up its nose at them. It disdained to feast on them, disdained to fill them out. But it occurred to me that if I could produce a greedier strain, the problem would be solved."

Carstairs was frowning slightly. "I did succeed in pollinating such a strain, but—I'm afraid I haven't been entirely successful. When the new strain fills in those faint speech auras, when it agitates them, you get speech and then silence and then speech again, in erratic snatches. The molds speak fragmentarily. Sometimes you get their last spoken sentences first. And you get repetitions—broken sentences. But you do get a confession of a sort."

"You get—"

"A moulage mold confession, McGuire. I can tell within a second when it will come. No, say within a minute or two. About half an hour after you've got the auras, the voracious molds devour the vocal cord impressions. As they ripple over them you get—what we've just heard. Snatches of speech for a moment. The molds pass from impression to impression, producing an auditory aura. Uncanny, isn't it, McGuire?"

"I'll say it's uncanny!" McGuire cried. "Carstairs, do you realize what this means?"

"He realizes, but he's, oh, so modest," Vera said. "It will revolutionize crime detection."

Carstairs gave her a stony stare.

"You can call in the filmpress now, Inspector," he said, lighting a cigarette. "You'd better tell them the angle I was working on turned out to be a bust."

McGuire was suddenly suspicious. "Why do you want me to say that, Carstairs?" he bristled.

"Because I'm going to Washington tonight, and I'm sure you wouldn't want the wrong kind of publicity until I've had a talk with the I. B. I. We've got to identify the 'he' of that conversation. Somebody was—or is—planning to be a dictator. I've an idea it's all closely linked up with Hilary's plant experiments. I wouldn't even try to dictate to you, McGuire, but if this is as big as I think it is, you'd be foolish to break it wide open in the wrong place."

McGuire stared at Carstairs for an instant, levelly from beneath his bushy brows. Then he shrugged, grunted and strode to the door.

"You can send those reporters in now," he called. "I thought we had something, but Carstairs figured the angle wrong, and we'll have to dig up a new lead."

CHAPTER V

Interplanetary Bureau of Investigation

GRAY and enormous, the massive facade of the I. B. I. building in the Nation's Capital was ablaze with lights when Carstairs descended from thrumming gyro directly in front of it, twelve hours later.

On both sides of the landing-lot, blue-uniformed guards stood checking the license plates of the arriving and departing planes, atomatics dangling from their hips. Up a broad flight of translucent plastic stairs Carstairs strode, and into a cold-lighted entrance

corridor where his credentials were examined by a non-volitional robot controlled from the the Identification Desk, and he was soundly thumped by an automatic weapon detector, and infra-rayed from a dozen angles.

A voice spoke out of the communicator at the end of the corridor.

"Whom do you wish to see, sir?"

"Agent James Greer," Carstairs said.

"Turn right, then left, then right. Take the fifth pneumatic lift on your right."

A moment later Carstairs was ascending through a thrumming blueness toward the eighth story of the seventy-story building. He emerged from the lift, walked down a short corridor, and was greeted by another voice from another communicator.

"Whom do you wish to see, sir?"

"Agent James Greer."

"Yes, of course. Turn left, then right, then left, then left again, then right. Take the sixth pneumatic lift on your right."

Carstairs walked down a long corridor muttering.

"Left, right, left, left—no, just right."

Before Carstairs reached the lift his passage was blocked by a non-volitional robot advancing toward him along the corridor.

Gently but firmly it took hold of his arm, and guided him back to the turn he'd missed, its expressionless metal face glimmering in the cold light.

A small, thin, communicator voice came from its speech box.

"Right, then left. Better luck next time, sir."

Carstairs wondered. He was whisked up to the thirty-third floor and was promptly greeted by another voice.

"Whom do you wish to see, sir?"

"Agent Greer," Carstairs replied, wondering if his voice would hold out.

"This is Greer speaking. Hello, John. How are you?"

"Okay, I guess," Carstairs groaned. "Where are you?"

"Turn right, then left, then right," Greer chuckled. "My office is the third on the right."

Carstairs made the necessary turns, strode down a long corridor, and into Greer's office.

Federal Agent James Greer* was sitting behind a massive desk between two twenty foot filing cabinets. Behind him an artificial sun-lamp on a tripod cast an eerie radiance over his straight, firm-muscled body, and lean, unsmiling face.

He was sitting there nude to the waist, his expression so grim Carstairs wondered what he'd done with the chuckle he'd heard in the corridor.

He did smile a little when he rose to greet Carstairs, but there was a strained something in his gaze which was the opposite of reassuring. He was strikingly handsome, the kind of chap nine women out of ten would have called beautiful without any derogatory implications.

"John, we've been busy checking up," he said. "We have something for you, but it isn't quite ready yet. It's a kind of exhibit in swift motion which will give you a jolt. I could give you a sketchy outline, but it wouldn't be half as convincing as seeing the whole conspiracy yourself."

Carstairs looked startled. "A conspiracy?"

"Well, you might call it that. We've reconstructed it, but it was a conspiracy before that. Something plenty disturbing, John—something we thought couldn't happen here."

"I'll wait," Carstairs said. "When you Federal men prepare something special it usually hits the target with a solid smack. I've seen a few of your visual reconstructions, with sound effects. You don't have to sell me on anything that goes on here. Where do I wait?"

GREER'S features relaxed. "Well, that depends on whether you'd like to spend the next half hour with a comparison microscope, or watching some of the boys improving their stances."

"If I could find my way around, I'd like to see just how much leeway you have when a row of gauge-sighted atomatics jams at point-blank range in one of the gunnery vaults."

"Okay, I'll conduct you around."

The two men left the office, walked down a long corridor, and turned left. They took the third lift on the right.

They were whisked up eighteen stories in a translucent cage, their faces pale in a blue glimmering light. Then they stepped out, and strode down a short corridor to where a huge red bulb glowed dimly.

Greer nodded to Carstairs, grasped the knob of a sliding door, and drew the portal open on a vast, vaultlike chamber filmed with rosy light. Into the rosiness the two men stepped.

They found themselves on a narrow balcony, staring down at a partial reproduction of a dead-end street. Constructed in shining plastex the portions of buildings which ran completely around one side of the vault, perhaps seventy feet below, did not look squalid. But the refuse bins standing before the narrow doorways, the cluttered condition of the between-building alleys, and the wax figures of shabbily clothed, slouching pedestrians most emphatically did.

* Government Bureau designations are seemingly the most persistent of all survivals. It is doubtful if the man in the street today realizes that the terms G-man and Federal Agent were in common use fifty years before the Federal Bureau of Investigation became the Interplanetary Bureau of Investigation with divisional offices on Venus, Mars and Saturn.

"It's important to get the feel of an environment, Carstairs," Greer said. "Impediments are more important, of course, than realistic architectural props. But if that street didn't look real the fellows wouldn't throw themselves heart and soul into the deadly work ahead."

Someone was moving along the street below. He wasn't a wax figure, though he was dressed like the others. A big man he was, with a slight limp, a livid scar on his right cheek.

"Recognize him, Carstairs?" Greer asked.

Carstairs felt a cold shudder passing up his spine.

"William Maile," he whispered. "The mutant killer."

"That's right," Greer said. "He's armed, John. You'll see his bodyguards in a minute."

As Carstairs stared three slouching figures emerged from shadows and fell in behind Maile. They followed him at intervals of several feet, swaying a little, looking neither to the right nor left. They carried themselves with the furtive but boastful air of all professional killers, contemptuous of the lesser folks in the dark doorways past which they swaggered, their eyes on the man they'd been paid to protect.

Suddenly there was another moving figure below. Still another, and then—the street wasn't quiet any more.

A tall young man stood on the curb opposite to Maile, an atomatic leaping in his hand. He was hatless, coatless, and his hair was blowing in a wind that seemed to shake the panes in the shining buildings as it tore in gusts down the street.

From the young I.B.I. man's leaping weapon there streamed a continuous spurt of orange flame.

Opposite him Maile's three bodyguards were firing also, sending a fusillade of energy pellets crashing into the plastex store windows behind him.

Maile was on his knees, clutching at his chest, when the young I.B.I. man went down. Blood was gushing from between the big man's fingers, and his atomatic, too hastily drawn, had clattered to the pavement at his feet.

But the young G-man's gun had also fallen. He was sitting on the curb, his arms wrapped around his middle, his features twisted in pain.

"He almost played for keeps," Carstairs whispered hoarsely.

Greer didn't reply. He was gripping the rail, his face deathly white.

The young Fed's companion, an older, heavier man, had finished the trigger men off with staccato blasts which spun them around and melted away their chests.

Now he was reaching down and tugging at the young agent's arm. The youth got up, swayed and sat down again.

"Think he's badly hurt, Jim?" Carstairs said.

"He caught a triple blast from a bad angle," Greer grunted. "Hang the luck, Carstairs! It happens sometimes. We're not all sugar candy babies."

As he spoke there was a dull explosion where the three trigger men had been lying in crumpled heaps. When the smoke cleared only the still form of Maile remained, his body grotesquely hunched. There was another dull flare, and Maile, too, was gone.

Greer waited just long enough to make sure the young Fed would recover. It wasn't the first time he'd seen three-dimensional images, skillfully projected, almost burn down a living man.

OUT in the corridor he faced Carstairs, his face as grim as death.

"Even a three-dimensional image projection of an atomatic can kill, John," he said. "You almost saw it happen."

"I suppose you had to charge them with penetrant rays?" Carstairs grunted.

"Of course. Otherwise our men might become careless when they have to face real atomatic fire."

"The images themselves were no slouches," Carstairs said severely.

"We projected an actual incident. You saw Maile 'getting his.' We laid him out before he could blast, but it took five of our lads to do it. He'd drawn, so we felt justified. A three-dimensional filmo-recording of his every movement was made by our lads as they closed in."

"Then what you just projected was that recording? It was only a repeat performance."

Greer nodded.

"But don't forget those images were charged to resist bullets. Templeton—Agent Templeton was the lad down there—had to blast from just the right angle. Otherwise Maile and his bodyguards would have stayed on their feet. There would have been no repeat performance. The projected images would have simply exploded without dropping."

"You mean he put the bullets in just the right grooves."

"John, he spent a week studying our trajectory charts on that shooting. Then we projected the images, and he practised on them from a hundred angles. So did Agent MacLean. In those practise tests the projected atomatics were not charged."

"I see," Carstairs said, running his sleeve across his brow.

"Of course, we don't want to kill our men

if it can be avoided. But an agent knows what he's letting himself in for when he signs on the dotted line. He knows when he takes his oath, and he knows when the filmorecorder in his atomatic snaps on, making a record of every incident. He knows that other agents will practise on his incidents, and that they'll be playing for keeps.

"He knows he'll be practising on other agents' incidents. We repeat every incident, Carstairs. We strive for precision blasting. It took five of our lads to dispose of Maile and his trigger-men in the original incident but you just saw two operatives burn them down with the same number of energy pellets."

Accompanying Greer back to his office, Carstairs used what he'd just seen as a measuring tape, mentally running it along the variegated, cross-grained surface of his own work with the New York Police Department. Neither McGuire nor any of the lads under him were as thorough as the Interplanetary Bureau of Investigation. I.B.I. men were as thorough on Mars and Venus as they were on Earth.

On Mars were other gunnery vaults, and—not all of the ruddy planet incidents involved just burning down human killers.

Carstairs experienced a sense of alienage and horror which went far beyond the visual impact of a dangerous criminal crumpling to his knees.

The knowledge that there were men and women so different from their fellows that they constituted a menace to the entire structure of society hadn't troubled the world of Carstairs' boyhood.

That there had always been human mutants could no longer be doubted, for psychiatry, with strides of increasing length, had gone back across the centuries, and studied the utterances of the more aberrant human types. There were perhaps not more than fifty living human mutants, but it could no longer be doubted that each age had thrown up a few, clear back to man's dim beginnings on Earth.

In the early years of the Twenty-first Century, Intelligence Quotient examinations hadn't been universal and compulsory, and the mutants had escaped detection—escaped so completely that, in Carstairs' boyhood, even imaginative people hadn't suspected a man's expression could subtly change, revealing beneath a cautious exterior something utterly sinister and—alien to normal humanity.

In the dawn age, mutants had crouched about rude fires in the guise of primitive witch doctors, and in the ages of superstition as miracle mongers, and in the ages of enlightenment—who could say? It was believed that the Twentieth Century had thrown up at least five hundred such monsters, some accepted as normal members of society, others typed by their contemporaries as dangerous lunatics.

There were perhaps fifty living human mutants. Eight of them had been studied by the I.B.I. One, a child of six with the brain of a super-mathematician, had been kept under observation in a small room on the fourteenth floor of the I.B.I. Building for three months because it had displayed a contempt for his playmates bordering on the pathological.

EVENTUALLY this six-year-old boy had been released, after psychiatric tests had shown that it was still too much of a child in its emotional reactions to use its great gifts dangerously. There had been others—a musical genius, a crippled girl with an I.Q. of 250, a painter who seemed able to look deep into his subconscious and depict the horrors crouching in what a psychologist of an earlier day had called the Racial Mind. These had taken the form of reptilian shapes, the figures of tribal cult deities, and something that shambled in darkness and that witchcraft had discovered millenniums later and symbolized as—a great leprous toad.

There had been no malice in the eight specimens—merely strange and disturbing powers, combined with an infinite contempt for normal humanity, and a conviction that they were superior in all respects to the men and women about them.

But the man Maile had been a cold, malicious child who had slain, and crept away to hide. He had been a child who had been shut up in an asylum for eight years because he had hated all mankind.

Maile's parents had been perfectly normal people. Yet he was a monster—a child with a look in its eyes that other children did not have.

Carstairs remembered the Maile trial, and the sensation it had caused. A child with the intelligence of an adult genius, defending itself on the stand, passionately asserting that it could not be judged by ordinary standards of behavior.

It had confessed that it had a lust for power alien to normal childhood, a desire to dominate others that would have seemed terrifying to the rude and savage elders of a jungle kraal.

On the stand the mutant child's eyes had glowed darkly, it had shot swift and terrible glances about the courtroom. On the stand it had sought to justify itself, quoting Nietzsche and identifying itself with the Overman of that mad philosopher's brutal credo.

"The Overman will come upon the scene of history with violence in deed and demeanor," the child had shrieked. "Morality will

not concern him. He will impose his will upon an entire people, vastly superior in numbers."

It had paced the stand, a little, white-lipped horror, mouthing threats, hideous in its frustration.

When it had been declared insane it had sprung from the stand, and fastened its wiry fingers in the alienist's throat. Mutants were seldom entirely normal physically, and the child Maile, despite its frail appearance, had possessed wrists like steel bands.

At the age of seventeen Maile had escaped from confinement and disappeared.

For thirty years psychologists had speculated as to whether it were not perhaps a hideous experiment on the part of nature, the horror that Nietzsche in his madness had foreseen and gloried in. Maile had been a tall, blond beast, ruthless, compassionless, convinced that humanity was less than nothing and that some way must be found of supplanting it.

As a child his impatience had taken the form of killing one of his playmates. As a man—what would he be?

Carstairs had walked the entire length of the corridor in silence and was almost at the door of Greer's office before he spoke.

"If Maile had not written threatening letters you'd never have suspected he was still alive?"

Greer nodded.

"Boasting letters, Carstairs. His desire for power was insatiable. We think he committed his almost perfect crimes merely as a sort of catharsis, to satisfy that desire."

"I just can't figure it," Carstairs grunted. "Why did he wait thirty years to commit a series of sordid murders and thefts. And why did he surround himself with henchmen like a twentieth century bank robber? The crimes were brilliantly executed, sure. But they brought him little actual power. You'd think—"

"I see what you mean," Greer cut in. "If he thought himself to be a kind of Nietzschean superman why didn't he try to stir up a hornet's nest on a less primitive level? Well, maybe those years he was shut away from the sunlight left scars so deep he just wanted to strike out at random, like a bruised snake. Don't forget—crime is a very powerful means of getting back at society for a fancied wrong."

"It still seems peculiar," Carstairs grunted. "The boy Maile was something monstrous such as you'd expect to find flowering like—well, there are parasitic plants on Phobos that send tendrils out so far so fast they creep half around the satellite before the summer solstice withers them. They happen to be mutants, too."

"Maile's gone now and we don't have to worry about him developing tendrils," Greer grunted. "His fingerprints checked with those of the boy Maile who stood trial thirty years ago, and he's pretty well documented as dead. You just saw one of our agents put five energy pellets into his image. There may be other mutants just as dangerous, but I doubt it. He had an I.Q. of three-ten."

CHAPTER VI

The Exhibit

STANDING behind his desk, Greer spoke into a communicator.

"Is the exhibit ready, Bronson?"

"Yes, we're ready to project," came from the instrument. "We've built up a well-rounded picture, Jim—so complete it has entertainment value. Hollywood might like it, if we put in a few glamour girls, and toned down the uglier scenes."

"It's too bad we have to neglect so many possibilities," Greer grunted. "Be right down."

There was no screen in the projection room, merely a suffused glow filling two-thirds of the chamber. Carstairs and Greer entered silently, and sat down directly beneath the projector. The viewing seats, which ran in a double row across the chamber, were wired for auditory and olfactory impressions too tenuous to be dispersed from the projecting medium by a diffuse particle transmitter.

The cone-shaped, three-dimensional image projector extended several yards into the glow, completely roofing over the double row of seats, which were occupied by G-men and G-women, leaning forward in a state of tension and grim expectancy.

A projection-room technician was hovering in the midst of the glow, making a few final adjustments and testing the field with a flat little black box which made clicking sounds. Satisfied, he straightened abruptly, and called out to the operator inside the cone.

"Okay. You can shoot now."

The room grew brighter and Carstairs thought he could see a moving something in the depth of the glow behind the technician's advancing shoulders. The technician's shoulders loomed enormous for an instant, and then receded, carrying a rosiness with them.

The three-dimensional image figure at the rear of the room didn't seem to be standing in a glow. The faintest of luminous auras clung to him as he moved about, but his skin was the true color of flesh, and the clothes he was wearing did not resemble projections.

He seemed to be a living person moving about in a perfectly natural way forty feet from the seated spectators.

A tall man he was, with a slight stoop, and silvery white hair—a scholarly type, who spoke in the clipped precise accents of the classroom, even though he was not now addressing a class. He was facing the projector, talking in a low voice to someone who was obviously not a student.

That someone had concealed a filmorecorder about him, but it was obvious that the figure did not suspect that his words and gestures were being three-dimensionally kinetographed. Carstairs didn't know just how the films had found their way into the archives of the I.B.I. However they occasioned him no surprise.

When the I.B.I. started collecting data for a three-dimensional image projection sequence they didn't go around asking people for films. They put the heat on and, as nine people out of ten, have secret filmorecordings stored away where they hope they won't be found, an abundance of material could always be obtained.

The problem was one of selection, and of not encroaching on the rights of honest citizens. Criminals could easily enough be persuaded to cooperate with the application of a little heat, and films in the possession of individuals who were not criminals were constantly being sent to Washington from all over the System as a result of the I.B.I.'s untiring efforts to wipe out crime.

Most of the films came from an aroused citizenry, but those that the I.B.I. forced from blackmailers and furtive scoundrels on the fringes of the underworld were usually of more vital importance in building an exhibit up until its cumulative force brought the agents assigned to the case to their feet with rage and a cold determination in their eyes.

The exhibits were intended to give the operatives a clear, concise picture of just what they'd have to combat when they swung into action. It was intended to arouse them, to put them on their mettle, to make them fighting mad.

"We have sizable precedents in history for what we hope to accomplish," the tall, scholarly man was saying. "In small communities people are very amenable to suggestion. We'll saturate a few small communities with just one, highly volatile idea."

He paused an instant, as though waiting for a reply from the man, or woman, who had made the recording.

"It's the personality of the speaker who starts an idea germinating, of course. It must be planted with violent, declamatory gestures. I am not suited for such a task, but I have engaged the services of a professional rabble-rouser who has the rare gift of being able to believe passionately in ideas which no intelligent man could possibly tolerate.

"He will be paid to disseminate our idea, and he will believe in it. I shall reimburse him so well that he will be willing to risk imprisonment and even mob violence to sow the idea in fertile soil."

THE tall figure smiled cynically. "A detestable idea, you understand, but volatile. Only a few people will listen to him at first. Psychopaths, hysterics of both sexes. But he has just the right kind of face for such a task, and his voice is deep, resonant. Frustrated women will be carried away by his strong, earnest gestures, and deepset, glowing eyes—the eyes of a tortured prophet.

"Then there will be the young men. In every small community there are young men with a deep-grained contempt for their elders. These youths are the exact opposite of mature rebels with social vision, and a reasoned hatred of outgrown patterns of behavior. They have no vision, and they hate nothing except the necessity of submerging their aggressive, often vicious egos in the sluggish stream of restraints and inhibitions they'd have to wade through to get anywhere in the life of the community.

"Our rabble-rouser will offer them an easy chance to stand in the limelight. They'll embrace the idea without examining it, as though it were something worth dying for.

"Then there will be the shrewd old cynics who have their fingers in just one pie. The rabble-rouser will spread a dozen pies before them neatly wrapped in the idea.

"Before the idea begins to germinate only a few people will listen. But when it poisons enough minds, our rabble-rouser will win converts by tens of thousands. From then on the rabble-rouser will inspire—terror. He'll cease to plead. He'll threaten.

"He'll shout and scream. He'll have a following, and something electric and terrible will go through the mass of people listening to him, and no one will be untouched by it. Absolutely no one."

The tall, white-haired man paused, and stared intently at the projector, as though he'd been asked a question.

"Yes," he said, his gray eyes gleaming with a chilly light. "The technique has been powerfully utilized in history. It is called demagoguery."

There was a dull flare, and the tall figure vanished.

For an instant the projection space was filled with a diffuse glimmering, as though the light which had generated the tall man's likeness had been dissipated evenly in all directions.

The gesturing figure on the platform seemed to come into being with the misty gradualness of an image advancing through a mirror which hadn't been properly cleaned. Or perhaps it was the image which gave an

impression of untidiness and confusion.

Certainly the rabble-rouser was doing his best to make a repulsive exhibition of himself while exciting undying devotion in the invisible crowd he was haranguing.

His collar was wilted, his hair fell in soggy strands over his brow, and his big, almost shapeless mouth would have excited nothing but pure disgust if there hadn't been an almost hypnotic something in his eyes which drew a fascinated, half-reluctant kind of admiration.

A snake rearing up and compelling attention just by the intensity of its stare might have achieved a little less—or more. It was hard to say. Certainly the man's harangue was not in his favor.

"It is easy to see why no one of any consequence would agree with us!" he shouted. "It is easy to see why we should be opposed from the very start by people who are determined to hold free elections, and commit other acts of criminal folly.

"We must form a solid body of opinion opposed to any attempt to prevent us from organizing. We must no longer submit to being compelled to assemble in halls with hardly any windows."

There was a dull flare, and the rabble rouser was gone.

A small, mild-mannered little man stood facing the camera, a book under his arm. Apparently it had been a warm day when he'd been kinetographed, for he was mopping his brow, and running his forefinger under his collar.

He did not see the two young hoodlums advancing along the pavement toward him. When one of them grabbed the book he turned, but too late to prevent the full force of a blow from a metal-edged fist on the back of his skull.

He dropped to the pavement with a groan, rolled over and lay still. One of the hoodlums kicked him in the face as he lay prostrate. The other hoodlum stamped on his outstretched right hand.

"You see what he was reading?" he grunted, his lips tightening cruelly. "Hartman's 'Man Comes of Age'?"

"It's a good thing we tailed him when we saw him taking it out of the library," the other hoodlum sneered. "Tear it up. Tear it up! He's gotta be taught a lesson."

A FLURRY of paper flakes descended to the pavement as the book was torn to shreds by the rabble-rouser's disciples. The sequence needed no audiocaption. Following as it did upon the rabble-rouser's belligerent mouthings, its significance was plain to the tight-lipped spectators.

It was the beginning of a revolution against learning, and the dignity of man.

A coward had made the filmorecording, for the two hoodlums were not attacked from the direction of the projector. They were hovering in leering triumph over the prostrate little man when they vanished in a dull splotch of radiance.

The projection was swiftly replaced by another, showing men and youths marching down the main street of a country town, and pushing before them, in metal wheelbarrows, joggling piles of books.

The picture changed. A swollen fire was reddening another street, etching in sinister silhouette the stooped figures of a dozen young fanatics. The youths were throwing the books into the flames. There were hoarse screams from the darkness beyond the flames.

The scene was gone, and the projection space was occupied by the rabble-rouser again. He was haranguing a vast throng. He was small, far away, and all the space between was filled with men and women with their eyes upraised. It was a remote projection, enormously reduced, and the crowd swayed like chaff in a magnetic something that seemed to flow from the rabble-rouser in waves, so that when he waved his arms and shouted every man in the crowd trembled, every woman moaned.

A glow blotted out the terrifying scene. In its place there appeared a quiet classroom filled with attentively listening students. A tall, scholarly man with snow-white hair was sitting behind a circular desk on a raised platform at the far end of the room. He was speaking in a voice that at times dropped to a whisper, at times rang out sharply.

"Perhaps the most gruesome fate that had ever befallen an entire people overtook the Parthian Empire in the reign of Phraates II. It was not so much a blood bath as—"

He was interrupted by a pale young man at the back of the classroom.

"Professor Parker. I'm compelled to object to what you've just said. I mean—before you drew the Persian parallel."

The tall man stiffened. For an instant something hard and challenging glittered in his pupils, as though he were about to dispute the student's right to be heard.

It was the student's right. It had been a right now for so long that no professor in his right mind would have dreamed of challenging it. To challenge it would have meant instant dismissal, for Freserling's theories concerning the effects of denying a sensitive adolescent the right to object to any statement that threatened to set up a psychic trauma in his subconscious, were too firmly entrenched to be brushed aside.

Professor Parker turned half about, and glanced at the historical graphs on the magneto-board behind him, as though assailed by sudden doubts as to their accuracy.

When he returned his stare to the pale student, who had risen now, his smile was one of scorn.

"Well? Just why do you object to my statement that the historical graph of Central Europe in the middle of the Twentieth Century rules out the possibility of the rebirth of repressive forms of Government in the Twenty-first?"

CHAPTER VII

The Ancient Evil

IT WAS plain the student seemed shaken by emotions too overpowering for his frail form. He looked much older than his years. His eyes were haggard, his cheeks sunken, and he made gestures when he spoke which seemed out of keeping with the words which poured from his lips.

There was something helpless, despairing about his jerking shoulders and waving arms. He did not wave his arms as did the rabble-rouser with purpose and strength. He would not have made much of an impression on a crowd.

Frustrated women, looking at him, would have shaken their heads and turned away. There was nothing about that pale, unstable youth that would have pleased the rabble-rouser's zealous audience, nothing that could have filled them with a fine surge of bigotry and rage.

"I deny that our liberties cannot be lost," he almost shouted.

As his voice gathered strength it became vibrant with something hard to define. There was no magnetism in his voice and yet his words were eloquent in a strange way that brought a sudden tension to the students who listened to him as he cried out that the graphs lied.

"So long as a single shambling beast in the guise of a man walks this earth, and despises learning and beauty and justice and mercy, our liberties are in danger of being lost. Surely in the rotofilms you have seen the shadow of the beast again, Professor Parker. Why do you stand there denying it? Why do you shut your eyes?"

Professor Parker wasn't shutting his eyes. They were wide open and fastened on the young man with an intensity of amazement quite unusual for him.

"A purely local phenomenon, young man. The graphs show indisputably that demagoguery cannot arise again in this century. A few absurd exaggerations in a mid-Western stump speaker are a far cry from historical demagoguery."

"The shadow has spread to a dozen towns. And why isn't the rabble-rouser in jail?"

A faint smile twisted Professor Parker's thin lips. "We live in a free democracy, young man. Surely you would not deny a man's right to be heard?"

"In ancient Rome there was such an evil," the young man cried. "It was called Ophiolatry. It was a mystical, dynamic cult—or so the worshippers claimed. Why should not men and women worship snakes in a society that worshipped everything else? Theoretically the contention seemed sound, but the Romans were not deceived. They stamped on it."

"It's just a local phenomenon," Professor Parker insisted, his eyes suddenly cold again. "One little town does not matter."

"In that one little town—my sister was killed by the shadow," the young man said, and sat down.

There was utter silence in the classroom.

Abruptly the classroom vanished.

There followed a sequence which brought a hard, joyous light to Carstairs' eyes.

The sequence showed the I.B.I. cracking down.

The rabble-rouser's followers were being marched off to jail.

In one projection just the young men, and then—the rabble-rouser himself.

The rabble-rouser was in the custody of the I.B.I. He wept, he shrieked, he tore his hair. He made hysterical womanish gestures.

He paced his cell, mounting threats.

He paced his cell.

He was gone.

"The projections which follow have a direct bearing on the Parker case," an auditory caption announced. "They're relevancy will become apparent as the exhibit proceeds."

Carstairs stiffened in sudden amazement. Standing before the projector, facing an unseen filmorecorder, was—the Curator of the Interplanetary Botanical Gardens.

John Carstairs' three-dimensional image was looking directly at the projector.

"I'm expecting a phone call from Hilary, Vera," he said, and he knew then that his secretary had contributed that startling filmorecording of himself on a gray morning a month previously standing in his office at the Interplanetary Botanical Gardens.

"John Carstairs ought to get a kick out of this," another caption commented, and on both sides of Carstairs G-men chuckled.

He knew then that the sequence had been inserted by Greer to relieve tension. He hadn't thought the I.B.I. would be capable of such a thing, and it amazed him.

But when the sequence proceeded he realized that it carried implications which were the opposite of amusing.

CARSTAIRS heard himself discussing Hilary's unsuccessful attempts to create a plant mutation with the intelligence of a human adult. He heard himself discussing Hilary's research background with the cool impartiality of a man who has a much broader one, but is not biased.

He heard himself telling Vera Dorn that Hilary's experiments had bogged down completely.

He couldn't hear Vera's replies, but he recalled them. Miraculously she had agreed with him. It pained Carstairs that she had sent the sequence to Greer without consulting him. She knew Greer, of course. The I.B.I. man often dropped in at the Gardens to get Carstairs' advice on some botanical crime aid that the agents in Washington had turned down.

Carstairs wondered if Greer realized Vera Dorn was far more of a woman than a botanist, even when she stared straight through a man into space. If Greer realized that, and Vera was susceptible to the rugged outlines of a G-man blocking out the familiar pattern with his stooped shoulders, and impetuous outbursts made on the filmorecorder inside her head, a spark might well have been ignited. A spark could start a conflagration.

Carstairs was seldom tormented by such thoughts, because there was no doubt how Vera felt about that pattern when he took her into his arms. But Greer had an extraordinary fascination for women. Carstairs had noticed it too often not to feel a little uneasy as the exhibit continued.

If Carstairs had been startled to see himself facing the projector, he was even more stunned when the next image sequence showed Hilary standing in the cellar laboratory of his Yonker's home.

The laboratory was familiar to Carstairs. But now changes had taken place in it that brought a paleness to his lips, and almost made him doubt the evidence of his eyes.

In one corner of the laboratory, behind a long, herbarium-cluttered table, stood something that looked as though it had been painted on the walls of a padded cell by a frenzied youth and allowed to become three-dimensional through some carelessness on the part of an attendant with the D.T.'s.

It wasn't merely repulsive. It had a soggy, distended look, as though it had absorbed nourishment in the wrong places, and was getting ready to burst. In shape it looked not unlike a huge, inverted umbrella with a handle seven feet in length.

The handle was obviously a stamen, but what the bloated, squatting shapes between the ribs of the umbrella part were, Carstairs was not able to determine. They looked a little like blind, mouthless toads squatting around the circular rim of the growth, but Carstairs knew they were a part of its substance.

Hilary was staring at the plant, a look of stunned incredulity in his gaze. He was standing directly before it, in a posture characteristic of him, his hands interlocked in front of his chest, his shoulders slightly stooped. He was squinting at it, really, for Hilary had abused his eyes, and was suffering from a mild asthenopia.

It seemed odd and a little terrifying to Carstairs that he should be thinking of Hilary as though he were still alive. Odd that the three-dimensional image standing there should seem to be a flesh-and-blood Hilary.

Perhaps it was Carstairs' utter uncertainty as to what was about to take place and his feeling that Hilary didn't himself know and was waiting almost fearfully for something further to happen. That something had already happened was clear from his expression. He was deathly pale, and the veins on his temples were thick, blue cords.

Suddenly one of the repulsive, toadlike outgrowths on the rim of the umbrella began to stir. Its fleshy "body" writhed, and a convulsive quivering gripped its "throat."

"I hunger," it said.

It had no mouth, but it spoke.

It spoke!

There was no emotion in its voice. The sound was cold, without intonation, and it seemed to come from deep in the outgrowth's structure. But it wasn't an echo. It wasn't even an improvisation on an echo.

It was an intelligent statement which could not have been made if the plant had not mastered at least the rudiments of human speech and thought.

Carstairs felt his neckhairs rise. No, this could not be just the rudiments of development. It had to mean the plant had completely mastered human speech. For the simple statement "I hunger" was far more intelligent than "I am hungry" would have been. It was more emotionally urgent. It was far more eloquent in its emotional implications. It had to mean the plant was capable of weighing the effects of its speech on human listeners.

It hadn't simply expressed a need. It had attempted to arouse compassion, to convey that it felt itself to be calling out from the depths of some great despair.

Another outgrowth stirred, rippled, spoke.

"Water!"

"I cannot breathe," another said.

"It is dying," Carstairs thought.

HILARY did not move. He just stood rigidly staring at the writhing outgrowths, like a man in the grip of an overmastering fear.

The plant was suddenly in motion. It was

moving closer to Hilary across the floor, all of the outgrowths convulsed with hideous writhings.

"I hunger!"

Suddenly Hilary did move.

His hand came out from under his laboratory smock as he tossed a white blob of something at the plant. It spattered against the plant, bursting, spilling a milky radiance.

There was a dull flare, and the laboratory vanished.

Carstairs knew that Hilary had hurled a deadly corrosive toward the plant, contained in a floating polarized pelliele of newly invented lighter-than-air glass. He had often destroyed vegetable growths in just that way.

He was glad he hadn't been compelled to watch the plant's death agonies.

He was sure that Hilary had performed an act of mercy. Though some miracle of grafting or hybridization had given to a plant growth all the intelligence and sensitive awareness that Hilary had hoped to produce in his earlier experiments, something in its structure had prevented it from absorbing nourishment. Probably its roots had atrophied and it had failed to develop a tissue substitute capable of osmosis.

Carstairs turned to Greer, sweat gleaming on his forehead.

"Where did you get that recording?" he whispered.

"Hilary took it himself, by remote control," Greer replied. "The filmorecorder was on the opposite side of the laboratory. His daughter found the recording after you took off this morning. She televised it through to us."

"Hilary continued with these experiments," an audiocaption stated. "In the end he must have succeeded in producing either a hybrid of two or more of the eight known intelligent plants, or a new mutation by hard-light bombardment. He must have created a plant growth of a high order of intelligence. Perhaps many such plant growths. Perhaps an infinite variety of highly intelligent plants.

"The projection which follows provides convincing evidence that he succeeded, despite the skepticism of the Curator of the Interplanetary Botanical Gardens."

Carstairs winced as chuckles came for the second time from both sides of him.

There was a dull flare, and Professor John Parker stood in the projection field. He was facing a thickset man with a heavy-featured face, and bushy gray eyebrows that met above the arch of his nose.

The moulage molds which Hilary's murderer had left in Hilary's study had not done the brute full justice. The three-dimensional image brought out tenuous lines of depravity in his countenance which the devouring molds had failed to record. Carstairs was not surprised at this, for his long experience with Mimas mold impressions had convinced him there were debasements those fastidious plant microorganisms were loath to record. When they devoured an aura of a face they didn't like, they filled it out with smudges here and there. Or so Carstairs liked to believe.

"Only one thing pleases me," Parker was saying. "There's no precedent in history for what Hilary has accomplished. An intelligent plant can't talk itself into prison the way that big-eyed numbskull did. With twelve of the best legal minds in the country to tell him how far he could go, you'd think he'd have sense enough not to threaten to overthrow the Government by force."

"He wasn't so long on brains," the thickset figure agreed.

"Well, Hilary is. But we won't need him. Instead we'll keep three or four of his big-brained plant mutations, with instructions for pollinating them.

"Just leave it to me," the man who was to kill Hilary said.

There was a dull flare, and the two figures vanished.

"On July twenty-third, John Parker left Earth in a privately charted roto-cruiser," an audiocaption announced. "Destination unknown."

Carstairs started. Parker's personal file hadn't yet appeared in the projection field. A half hour before Carstairs had never even heard of him. Yet so vivid had been the impression made by that tall figure, with his smooth gestures and quiet, cynical stare that the projection which followed filled Carstairs with a feeling indescribable to anyone unacquainted with the problems of crime detection beyond the ring of the inner planets.

A glass-walled space hangar loomed above nine small figures wending their way across a skyport suspension bridge. Off to the left the slender cylindrical hull of a Trans-Saturnian roto-cruiser glimmered against a leaden sky. It had begun to rain, and a slow drizzle was descending over the intricate interlacings of aerial runways, and mooring pylons that filed the foreground of the projection field.

The projection was enormously reduced, so that the skyport seemed to stretch away into gray distances, and the scene had an unearthly quality which was enhanced by the glow of rocket flares, and the shimmering curtain of rain.

Carstairs knew that roto-cruisers of modern design had a cruising radius of six billion miles.

He glanced sideways at Greer, wondering.

The spaceport vanished, and Hilary's study filled the projection field.

All about the spacious, book-lined room, so familiar to Carstairs, were Mimas molds

of Hilary moving out from his desk, sinking down, and lying in a crumpled heap on the floor. Also there were the three-dimensional image projections of the Mimas molds Carstairs had recorded that morning, and televised to Greer from his office in the Administration Building of the I.B.I.

CHAPTER VIII

The Little Dark Shape

JOHN CARSTAIRS was in the projection field too, and McGuire and Vera Dorn. Nearby the big brute who had killed Hilary was crouching and drawing forth the murder weapon, then leaving by the window behind Vera Dorn.

One of the G-men behind Carstairs grunted, causing him to wonder if the I.B.I. had other recordings of the killer in its files.

He was not left long in doubt. There were eight other sequences showing the killer, and they followed swiftly while Carstairs stared with gaping jaw.

In not one of the sequences was the big man plainly revealed. Only his shoulders showed in a gray fog, or his profile in a lighted window. Later he was no longer alone but accompanied by something strange and dark and small that moved with him, carrying a weapon that was long and slender and not like the murder weapon at all.

"Honest citizens made these recordings," Greer whispered. "In the early dawn. Someone happened to be passing, and saw our man descending from a window, or was drawn by the screams of the poor devils he burned down. We get millions of such recordings, for nearly everyone carries filmo-recorders today, and you'd be surprised how curious most people are, and how anxious they are to help the I.B.I."

"But how did you know it was he?" Carstairs exclaimed. "Those are just brief, fragmentary glimpses."

"He's always accompanied by that little dark form. We assembled this selection after you got in touch with us, and described the attack that was made on you in the hall of Hilary's home before you discovered he'd been killed. We've been getting these recordings for about a fortnight now. He always kills in the dawn, and he's always accompanied by that little form.

"He—" Greer hesitated an instant. "It's gruesome, Carstairs. He blows off the heads of his victims with a blastick. He seems to want—certain documents. All of the victims were prominent men, Carstairs—high Government officials, State Department executives. We think he's acting for Parker."

"You do, eh?"

"We're pretty sure of it, Carstairs."

The projection field had filled with a group of grim-faced police officers, standing in a room even larger, more shadowed than Hilary's study. A shaft of cold light bored down in the gloom, limning in startling clarity the outstretched form of a gray-haired man lying prone.

A rifled brief case was beside him on the floor. There were documents scattered about. A reading lamp had been shattered and the shade shredded to ribbons, and hurled into a far corner of the room.

The entire top of the dead man's skull had been blown off.

Carstairs felt a little sick.

"Blasticks are—uncommon weapons on Earth," Greer commented.

Carstairs nodded. He was visualizing an upstairs room in Hilary's big house—a room filled with trophies from beyond the ring of the inner planets.

In that upstairs retreat were plant and animal curiosities from a dozen bright little moons and—a rack of explorer's weapons. The rack had contained six blasticks.

Carstairs was sure the rack was empty now.

He was sure too that something else had gone out from Hilary's house. Something small and dark like a deformed shadow, that accompanied the big man who had bashed in Hilary's head. A something that knew how to use human weapons, and had no compunction about sending an energy pellet crashing into a human skull.

For an instant time in the projection field appeared to stand still. The police officers scarcely moved, and the man on the floor, whose brain must have exploded nauseously, gave to the entire scene a peculiar quality of horror.

The case file of Professor John Parker concluded the exhibit. Identification charts, poroscopic records, biographical data sheets, and information obtained from spoken and written communications passed in rapid review before the spectators.

Not a great deal was known about John Parker. He was of mixed Scottish-Austrian ancestry, and held post-graduate degrees from three European Universities. His advance in the academic world had been rapid, for he was a man of engaging personality, when he cared to be, and had a profound insight into the essentially pragmatic trend of modern education.

He knew how to impress men of prominence in his chosen field, and his scholarly contributions to scientific journals had been widely discussed and quoted.

At no time in print had he displayed a

medieval, chauvinistic, or anti-democratic bias. He was regarded as a liberal with a slight tendency to cloak controversial subjects with a hazy veil of verbiage which remained impressive because of the immense erudition at his command.

TO his students he seemed at times a little overbearing in manner, but, in general, he was well thought of at Georgetown University, where he had occupied the Chair of Comparative History for a decade.

He was reputed to be a man of considerable means, and there were even rumors that he had inherited a fortune from an Austrian relative a few years previously, and had almost unlimited funds at his command.

When Carstairs left the projection room his features were more strained than they had been. The spectators had risen quietly, and departed without comment, some to seek detection rooms and questioned-document laboratories, others to the Division of Spectroscopy, and a few to a large busy room on the twenty-third floor, where they would resume work on the Parker case.

All of the spectators would be assigned to the file within a week, but the majority were engaged in other activities, and would not be transferred until the case had been made airtight.

"Did you like the preview, Carstairs," Greer asked, when they were again out in the corridor.

"Well, that depends what you mean by like," Carstairs said. "People like to look at snakes. I know—we've some specimens from the Saturn field which are so snakelike in appearance it's hard to believe they're true plants. Sometimes the Marine Stove is so crowded we have to close the gates, and turn away visitors. But on those crowded days all of the congestion radiates from just one exhibit.

"People stand before those snakelike plants for hours at a stretch. We have queues radiating out from that one exhibit like the spokes of a wheel. People like to watch snakes, behind glass. But people don't like to mingle with them much. Not our kind of people, Jim."

"All the people in that exhibit weren't snakes," Greer said.

"That's right," Carstairs agreed. "And I'm still remembering what happened to them."

"It won't be so good if we stop remembering," Greer said. "Particularly since Snake Number One has flown the coop. I'm jumbling metaphors six ways to Christmas, but you get what I mean. Roto-cruisers have a cruising radius of six billion miles. He

[*Turn page*]

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could be anywhere between Mars and the Twelfth Planet."

"Or on Mercury," Carstairs pointed out. "The steamy atmosphere would be right up his alley."

"I've a hunch he traveled out beyond the ring of the inner planets," Greer said soberly. "It's just a hunch, I'll admit, but I'd stake all my chips on it. As for the steamy atmosphere—there's nothing torrid about Parker. He's a cold, malignant kind of reptile, if I'm any judge of character. His scholarship is just a mask for something we haven't peeled the skin off yet. A very bitter fruit lies within him and it's rotten to the core."

"Snake Number Two is still at large," Carstairs mused, preceding Greer into a pneumatic lift. "Perhaps he knows where Parker is hibernating, and maybe—shedding his skin."

Half an hour later they were still discussing the exhibit, slumped in chairs which Greer had pulled out from his desk and into a shaded corner of his office.

Carstairs had been doing most of the listening, but suddenly he quietly took possession of the conversation, changing a little the footing of complete equality on which both men had been teetering.

The footing had to slope a little one way or the other, for two powerful and energetic personalities cannot function smoothly together unless one is willing to concede that the other may have a little more to contribute temporarily.

Greer would never have consented to relinquish all the details of an investigation to Carstairs, but once or twice in the past he had paid the highest kind of tribute to Carstairs' talents by turning over the major portion of his authority.

In so far as it was permitted by the regulations, he'd consented to function as second in command, and allowed Carstairs a tremendous leeway, even to the point of accepting his advice as tantamount to a command.

He did so now, gracefully and without abrogating an iota of his dignity.

He had seen in what direction the conversation was leading. Carstairs was bringing his best creative energies to bear on a problem which neither man could have solved alone. The problem of tracking down Hilary's murderer, swiftly, remorselessly, and of getting closer to Snake Number One.

GREER could see the tension mounting in Carstairs' level gaze, could see that he was needling his thoughts to a tight, puckered focus all around just that one problem.

"If you've got an angle, John, we'll cooperate with plenty of what it takes," he said. "Number Two is right here in Washington. We're sure of that. Another high Government official had his brief case rifled a few hours ago. There isn't much left of him from the shoulder up. Henry Suydam, the Third Assistant Secretary of State. Number Two must have flown to New York, killed Hilary and flown straight back."

"We don't know anything about Number Two, do we?" Carstairs said suddenly.

"I'm afraid we haven't much on him. Just those molds he left in Hilary's study, and the timbre of his voice. There are missing links in every case, and he's one of them. I mean, his identity is."

Carstairs nodded.

"Physically, he seems to be a pretty primitive type. But of course that doesn't mean he has a low I.Q. A combination of course-featured racial strains in his ancestry, cro-Magnon, perhaps, if he's French, Neanderthaloid if he's a Celt, can give a highly intelligent man a primitive look. There are more such throwbacks than you'd suspect, for there was some interbreeding among the stone-age roughnecks, and homo sapiens."

"Vera tells me you're always giving her little lectures such as that," Greer said with a chuckle. "I thought you were supposed to be a botanist."

"I was just trying to etch in his personality for you," Carstairs sighed. "You fellows fill in plenty of gaps."

"Yeah, we do," Greer admitted. "But not in exactly that way. We don't brush up on our anthropology right when we're trying to sink our hooks in a killer."

Carstairs' face was suddenly grim. "Jim, get this. I'm almost sure I can lead you to him. We've nothing to go on but I'll waive that. I'll have to get in touch with Vera at the Gardens, and have her vacuum-express two plants to me. If you can keep the New York-Washington teleotubes open for an emergency transmission I'll have them in an hour."

An exultant glint came into the G-man's eyes.

"Okay, John. I'll clear the tubes."

CHAPTER IX

Carstairs Takes the Helm

A VELO-CAR was waiting for Greer and Carstairs when they emerged from the I.B.I. Building an hour and twenty minutes late. The plants had been delivered to Carstairs by special messenger, and it had taken him only a few additional minutes to complete his preparations.

The two men descended the broad stairway between guards stationed at intervals along the steps and climbed into the small, highly maneuverable vehicle.

The G-man took the controls, while Carstairs drew up his long legs and wedged himself in the narrow seat at the left of the driver's straddle.

The motor roared into high, and down the long white boulevard, which stretched between the cluster of Government buildings on Capitol Hill and the business and residential districts of the Old City, the little vehicle sped, its sirens wailing.

"John, I still don't get it!" Greer had to shout to make himself heard. "The population of Washington is nine million. How in blazes can you find him in a city this size just by making turns in a velo-car. We haven't a single clue—absolutely nothing. We don't know who he is, or anything about his habits. We're not even remotely in touch with anything that has touched him."

Carstairs nodded. "I said I'd waive it!" he shouted.

"Carstairs, what in blazes is inside that little box? Why don't I get to see it?"

"If you saw it you wouldn't believe it!" Carstairs shouted back.

"Why don't you let me decide? It's a plant, eh? What kind of a plant? What's it for?"

"It points," Carstairs said.

"It—what? What did you say?"

"Turn left," Carstairs shouted.

The velo-car had reached the sparsely populated outskirts of the Old City, and was speeding down a narrow street lined with two-story warehouses which loomed in squat silhouette against a luminous patch of night sky.

Greer rotated the controls, and it turned into another street also lined with warehouses. Down the dismal thoroughfare it sped, its sirens still wailing.

"Right, when you hit the next intersection!" Carstairs shouted.

"You said it pointed, Carstairs! What at? Is it a plant with fingers?"

"Look sharp, Jim! There's the traffic light."

The velo-car swerved again, encircling the traffic tower, and turning right into another dismal street.

The warehouse district extended for four miles along the Potomac, and through most of its length the velo-car zigzagged in and out through a maze of streets that seemed to run at cross-purposes with the labyrinth of conjectures inside Greer's skull.

Every time he shouted a question at Carstairs another intersection would come sweeping toward him, and he'd have to turn the car about, and lose his chance of getting an answer.

"We wouldn't have to turn so often if the whole district wasn't a little off center," Carstairs apologized through his cupped hands above the roar of the motor. "Washington was once a city of symmetrical streets, but when it started spreading out it lost its symmetry. The streets here run in all directions, but I think we're on the right track. The plant keeps pointing in just one direction."

"Couldn't we just cut across to where it's pointing?" Greer shouted.

"We're following in that direction. We have to keep making turns to do it. The direction is almost directly ahead of us, but to reach it in a straight line we'd have to pass through buildings. Shall we try it?"

"Maybe we should!" Greer shouted. "That way I'd have a chance of finding out just what you've got in that box. A metal box wouldn't be smashed up. Only you'd be, Carstairs."

"It's such a little box!" Carstairs shouted. "Why should you be curious about a box no bigger than a wrist watch?"

"If it was microscopic I'd still want to take a peek inside. You've got a plant in there that points, eh? Like a compass?"

A whistle came from Carstairs.

"You planted the pin smack on the donkey's posterior—and blindfolded! Jim, you're a genius!"

"You mean to say it does point like a compass?"

CARSTAIRS nodded. I do indeed. It not only points like a compass—it is a compass. It's called the Compass Lichen and I've got it balanced on a metal pivot inside the box. It comes from Uranus."

"Good heavens!" muttered Greer, looking a little dazed. "You mean it's polarized like a magnetic needle?"

"It's polarized, but not magnetically. Its almost unbelievably sensitive tendrils pick up vibrations from approaching plant organisms. It points in the direction of—perambulating plants."

"Perambulating plants!"

The motor wasn't making quite so much of a roar now, and Greer had turned off the siren on entering a street which Carstairs seemed to think might be within five or six blocks of their destination.

He found he could make himself heard without shouting. "I don't get it, Carstairs. Why should it be a plant?"

"Uranus is a world of formidable perambulating plants," Carstairs explained. "It is sinister, gray, terrible world for a plant that is small and defenseless. The carbon eating diamond plant is just one of fifty huge Uranian growths that prey on the little, creeping lichens. On Uranus lichens really do creep —the term 'creeping' there doesn't mean they

just spread out by growing larger. They're not anchored to any one spot. They move about swiftly on their centipede-like legs, and when they scent danger they point in the direction of the big walking plants—devil shapes to them—that feast on lichens.

"They point, and scurry away to safety. A compass lichen can detect a perambulating plant from a distance of eight or ten miles. Uranus, being a big world, is a world of vast distances, and the tendrils of that little curious plant have a long-range sensitivity."

"But suppose there are a dozen perambualting plants approaching from different directions."

"Then the needle—I mean, its tendrils—become useless. They jump about erratically in all directions, just as the needle of a compass does on Mars, where there is no magnetism."

"Carstairs, you mean"—Greer's voice was suddenly grim—"you mean all perambulating plants give off vibrations which the lichen can pick up from a distance. The same kind of vibrations?"

"Apparently," Carstairs said. "We have no means, of course, of detecting the vibrations. No human instrument could measure them, because they are too attenuated. But the compass lichen has been conditioned by natural selection to detect them, just as male moths of a certain species can detect the presence of a female by vibrations that do not show on any instrument. You can shut the female moth up in a steel vault where no scent could possibly penetrate, and the males will be drawn to her from a distance of several miles."

"Holy smokes! I mean, I knew about the moths, but this lichen—Carstairs, don't all plants give off such vibrations. Why should a perambulating plant give off a special kind."

"They seem to. That's all I can tell you. The lichen only points in the direction of a walking plant. And there aren't many walking plants roaming the streets of Washington."

"I'll say there aren't!" Greer grunted.

"In fact, Number Two's little dark companion is probably the only— Gosh, Jim! This is it?"

They were in the middle of a somber street lined with squat, ugly houses—one of the scant half dozen residential blocks which bisected the dismal warehouse district.

"Swing over to the other curb, Jim!" Carstairs' voice was urgent. "Quick—and douse the headlights!"

Greer obeyed, rotating the controls and braking the little vehicle to an abrupt stop before a vacant lot flanked by fluorescent billboards.

"That's the house, Jim—the one directly across from us!" Carstairs whispered tensely. "Not the big one, but the little, two-story one with a sloping roof. The lichen's pointing directly at it!"

"I hope it isn't just playing a hunch!" Greer grunted, snapping off the headlights.

For an instant the two men sat in darkness, staring across the wide street in a silence charged with excitement.

Then Greer spoke. "We may as well get this over with. Here goes, Carstairs."

He bent forward, clicked on an emergency beam police transmitter. He waited for the beam to agitate a headquarter's unit, then spoke into a subdued roaring a foot from his face.

"This is Agent James Greer speaking—Greer, Agent Greer of the I.B.I. Film off South Seventy-eighth Street, between Avenues H and Avenue J. Avenues H and J. Leave a gap in the field at the south end of the block wide enough to admit a velocar. Edge the gap with radiance. That's all."

A VOICE came out of the roaring. "Lieutenant Blakiston of the Fifth Sector Emergency Cutoff Detail. Blakiston speaking. Blakiston to Agent Greer. Shouldn't we leave a gap wide enough to admit a police car?"

"I never could take seriously the legend of police superiority," Greer grunted. "Sorry, Blakey."

"A Rhodes Scholar," Greer grunted, shortening the beam. "Two years at Harvard, three at Oxford, though you'd never think so watching him wall in a sector. He sweats along with his men. But I'll be scraped raw before I'll let him send a police car through."

He spoke into the altered beam field. "Come on in, men."

"Henderson and Dunnary, Velocar Eighty-seven," came from the roaring. "We're at Ninth and K Avenue."

"Giles and Kilgallen—Car Ninety-four. Eleventh and H."

"Baker and Harris, Sixty-three. We're just entering the warehouse district, Jim."

Greer spoke again. "Okay," he rapped. "Converge at once. South Seventy-eighth, between Avenues J and H. We're parked with our lights doused in the middle of the block. The little house opposite with the sloping roof is our target for tonight. You'd better jump out as soon as you pull up."

"Has the block been filmed out?" came from the roaring.

"It has, but there's a gap in the field wide enough to let you through. Okay now, fellows. Step on it."

Greer turned to Carstairs. "John, did you ever feel that you've lost what it takes to crack a case?"

"Yeah, many times," Carstairs answered.

"But it isn't so bad as just sitting around waiting for the show to start."

"What in blazes are we doing now?"

"Well, we could get out. We could look over the premises."

Greer frowned. "And tip off our hand?"

"If we're not being watched right now, we're not likely to be in the next five or ten minutes," answered Carstairs.

Carstairs knew why Greer hesitated. The time factor was important. If Greer could find out which was the best door to crash, the agents who were on the way, could close in more swiftly.

Carstairs descended from the velo-car and walked across the street, followed by Greer. A man was perhaps a fool to go poking and peering at chinks at something he was going to crack down on, Carstairs had to admit. There was always a chance the something might be watching, and come gliding out without waiting for a blow to be struck.

Keeping in the shadows, the two men crept around to the back of the house.

Unknown to them, out through a window in front of the house something small and dark and agile climbed, a blastick bobbing in its clasp. To the soggy ground under the window it dropped, moved out across the pavement, and then back close to the house.

It bent low as it crept along in the darkness close to the house. It bobbed and weaved in the shadows—a hunched, misshapen thing—reached the corner of the house, and seemed to hesitate, peering into the blackness beyond. Then it went on into the rock garden.

Carstairs and Greer did not hear it approaching. There was a fountain in the garden, and a pool of still inky water glimmering in the faint glow of a lighted window. The two men were standing with their backs to the window, facing the fountain.

"Two agents lying flat on their stomachs behind those two rocks could catch anyone coming out in a crossfire," Carstairs suggested to Greer.

There was a sudden, terrible flare, and an energy pellet screamed past Greer's face. The surge of force which accompanied it lifted him up, twisted him around, and hurled him into the pool.

Carstairs swayed in the blast, fell to his knees, and then got up again. He reached under his coat. A white blob of something came out, went floating toward the little dark shape.

It exploded with a leaden plop, spilling a milky radiance just as the shape fired again.

Carstairs did not hear the shrill, ghastly keening which came from the shape as the blastick dropped from its clasp. He did not see it shrivel and blacken as the corrosive from the capsule ate into its substance.

He only saw Greer floundering a yard away, for he was in the pool with Greer, drenched to the skin. The blast had torn away most of Carstairs' shirt, so that when he regained his feet he looked like a bronze statue in the moonlight, his big shoulders gleaming, his hair plastered to his skull.

SHOUTS came drifting around the corner of the house as he waded out. He saw something shapeless and hideous lying in the grass at his feet. Leaping over it, he picked up the blastick, and headed for the street.

Three velo-cars had halted before the house, and G-men were getting out.

Carstairs shouted, waving the blastick.

Four Feds tore across the pavement with automatics jutting from their fists. Two remained out in front.

Carstairs went racing back around the house, once more. The rear door hadn't opened, but the light in the one window had gone out.

Greer was standing by the fountain, his clothes sopping, his face ashen in the moonlight.

"Flat on your faces!" Carstairs shouted. "Quick, down!"

Greer dropped to one knee as Carstairs spoke. Greer's hand traveled to his hip.

The Feds dropped flat behind boulders.

Tear gas bombs sailed through the air. Three windowpanes splintered with a crash. Gray smoke drifted out.

Carstairs had crouched behind a rock, and he had smashed a glass herbarium at his waist. Something dark and ropy-looking was clinging to his hand. It looked not unlike a writhing snake.

The back door was suddenly flung open. Standing framed against a faint glimmer from inside the house was Hilary's murderer, both his hands upraised. His eyes were red and swollen from the tear gas, and he seemed incapable of speech.

"All right, start walking," Greer yelled. "Keep your hands up, and don't try any monkey business."

The tear gas had seemingly robbed the big man of all desire to resist. He stepped out from the doorway, his hands still upraised. Tears were running down his face, and his upraised fists were clenched.

He looked a little like a big, muscular infant having a tantrum a yard from its crib.

Two of the G-men rose, their atomatics leveled at his head. One of them took three swift steps toward him.

The big man released the lighter-than-air pellicle without drawing his arm back. Simply opened his hand and let it float into the G-man's face.

The G-man screamed and went reeling backwards, clawing at his cheeks.

"Hold your fire!" Greer yelled. "We've got to take him alive."

"We will!" came from Carstairs.

He stood up, hurling the ropy, writhing plant thing straight out from his body. His wrist made a complete turn, as though he'd given the plant a violent twist.

The big man had started to make a dash for it. He was running when the writhing plant caught him, with a convulsive completeness in every part of his bulk.

His knees buckled, and his head jerked back. He clutched at his throat and threw one arm straight out. His elbows rose as his spine arched back.

He squirmed, screamed, and made frantic efforts to free himself. He thrashed about on the ground. His knees came up, and remained so tightly lashed to his stomach that he looked like a mummy rescued from a cave-in after lying for two thousand years in the ground.

When his thrashing ceased his entire body was a mass of tightly laced tendrils and complicated knots. His wrists were tied to his ankles, his knees lashed to his stomach, and he could not even move his head.

"The lasso plant duplicates nearly every variety of knot," Carstairs said, as though in answer to the startled question in Greer's eyes. "It's curious how basic and universal knot patterns are. I've never failed to find wall-knots, clinch-knots, double Flemish loops, surgeon's-knots, slippery hitches, Marline hitches, throat-seizings, round-seizings, and even rare bale-sling knots."

"My stars!" Greer choked.

The pellicle which had exploded in the G-man's face had contained no corrosive acid. He was wiping his eyes with a handkerchief. His cheeks were unscarred.

The fact seemed to have an almost tonic effect on Carstairs, for he warmed to his subject.

"It comes from Mimas, and has developed what is probably the most effective means of self-defense in the Solar System. It ties its enemies into loops."

"You mean to say—"

"In the Mimasian rain forests it builds up a tension by twining itself around a tree-like growth—a sapolite. The instant it is attacked it lashes out. Its natural enemies are all formidable perambulating plants. When it is hurled with a violent twist against any heavy, moving bulk the evolutionary survival mechanism is touched off, and it starts forming knots."

"If we had a handcuff plant, that would just about clinch it!" Greer snapped.

"We have," Carstairs said. "It comes from Ganymede, and it forms fibrous bands with the strength of say, berylium-steel, around the tendril 'wrists' of its natural enemies. It's called the chain link creeper."

Carstairs' face was suddenly grim. He walked to where a shrunken, corroded something lay on the wet earth at the edge of the fountain. He stared down at it, moved it a little with his foot. A shudder went through him. The body of the little dark thing had been burnt to a crisp.

"There isn't much left of it," came from Greer in a strained whisper. "The face is gone, completely. The body is melting away, too."

He shrugged.

Carstairs looked at Greer, an unspoken question in his eyes.

The G-man's face was a tight, somber mask.

"Don't worry, John. He'll talk."

CHAPTER X

The Trail Leads Skyward

LATER Jerry Solury and Fred Ellet, newsfilm men from rival syndicates stood a little apart from a group of their fellow reporters on a skyport suspension bridge, staring down at the long tapering hull of a Trans-Saturnian roto-cruiser.

Behind and beyond, loomed intricate interlacings of aerial runways and mooring pylons and glowing pale domes and an outer tier of cargo ship hangars which stretched away into golden distances in the blaze of a noonday sun.

Far below twelve tiny figures were wending their way across one of the narrow runways toward the gravity ports of the slender vessel. They were approaching, not a motionless hull, but one that pulsed and glowed and quivered. A crew within was busy testing a thousand instruments. They checked the atomotors, uncapped the rocket tubes, and released numberless delicate tensions, including some human ones such as only skymen know who need the feel of a thrumming deck under them and are chafed by the landlubber's bit.

"No, that's Greer," Solury was saying. "Carstairs is the one that's walking a little apart. He isn't in uniform. See, he's just a couple of paces behind that little fellow—no, it's a girl. Looks like his secretary, but I wouldn't swear to it."

"It could be the Hilary girl," Ellet said. "They're both about the same build. Me, I'll take a redhead every time."

"Her hair looks red to me. Can't see much of it, because she's standing in front of that glow. Hey, stop hogging the view!"

"Just looking at her from this distance won't get you anywhere. A hundred years ago there were fellows like you, and you know what they called them? Chiselers. She's Carstairs girl. So don't waste time imagining how swell it would be to sit opposite her in the Pelican Club for, say, a couple of seconds, and maybe hold her hand."

"I bet you'd get up and ask her to dance. But maybe while dancing you'd bump into Carstairs. I wouldn't want to be in your shoes then, Ellet. He's got shoulders like an airport stevedore."

"You said something like that once before," Ellet said.

Solury's face was suddenly grim. "Yeah, I remember. We were waiting for just the same sort of news handout we can't get now. Leading film stuff, with Carstairs taking charge, and adding to our worries."

"Carstairs is the key-man of this too. But at least we know what it pivots around."

"Do we? How much do we know?"

"Enough to make head captions, Solury. We know it pivots around the Hilary case. We know the I.B.I. has been drawn in. We know they caught the man who killed Hilary. We know he talked to the I.B.I. Just what he told them we don't know, but there's no law against speculating."

"If we had access to the I.B.I. files on the Hilary case we could speculate. But all we really have learned is—that roto-cruiser down there isn't an expedition ship. It's going to the Twelfth Planet, but the I.B.I. won't be collecting the same kind of specimens that exploring expedition the Gardens sent out last year is supposed to be after. The I.B.I. doesn't send a ship out beyond Pluto just for its health."

"Yeah, I wouldn't want to be out that far."

"Very few people would, Ellet—whether for their health, or otherwise. You remember what happened when Bronson discovered the Twelfth Planet in Nineteen-ninety-seven through the six hundred-inch on Mount Palomar."

"He had a coronary accident," Ellet said.

"Yeah. I'm not claiming his heart attack was brought on just because a new planet 'swam into his ken', to quote an English poet who died young from a different kind of heart trouble. But when he saw that planet he must have known that men would go out to it, and not come back. It is not pleasant to know you are sending men to their deaths.

"Being an astronomer, he knew just how cold and hellish it would be out there. Five billion miles from the Sun, with no holds barred. He must have known that life couldn't exist out there. He must have known how hard it would be for a man to travel that far from the only source of warmth our little race has known, and not go stark, raving mad. But being an astronomer, an able one, and having a decent respect for the opinion of mankind, he had to announce that he'd discovered another Trans-Plutonian Planet."

"He had a heart attack."

"The discoverer of the Eleventh Planet didn't give his name to that one, either," Ellet said. "Nor the discoverer of the Tenth."

"It's just as well he didn't give it a mythological name, or call it Bronson. We have too many planets that belie their names. Neptune isn't watery, and the Sea King's daughter would have smothered on the little moon that bears her name. It's supposed to be hot in Hades, which was Pluto's domain. And if he'd called it Bronson he'd have had a frozen monument five billion miles from his grave."

THE film reporter shrugged. "We were talking about head captions, Solury."

"Down there you have the making of one. The I.B.I. is sending a roto-cruiser out, fourteen months after Professor O'Hara took off in an expedition ship which got plenty of head captions for the I.B.G. But I've a hunch this hasn't anything to do with the O'Hara expedition."

"But O'Hara's still out there."

"O'Hara is, and so are the other members of the expedition. But they've been gone more than a year, and Hilary wasn't killed by remote control. There must be something on the Twelfth Planet that has a direct bearing on the Hilary case."

"D'you suppose that's why Hilary's daughter is going along?"

"She's a licensed teletape operator. She passed the WAP minimum speed field tests last month, and applied for a temporary assignment with the I.B.I. I imagine Carstairs pulled a few strings. He can walk into Greer's office and practically turn him into a zombie while he takes the helm. That's no reflection on Greer. The man's tough and competent, but he knows that Carstairs is as temperamental as an electric eel. He's the only man on Earth the I.B.I. would probably hair-split a regulation for, and then hand him both sections."

"But the Hilary kid is probably going along for personal reasons. I suppose, she wants to be present when the I.B.I. cracks down. Even if it means going through the sort of ordeal a girl her age hasn't been schooled to endure. Congealed limbs, maybe, if she steps out without a subatomic heat lamp strapped to her Lana Turner."

"A girl such as Helen Hilary sort of does something to me, Solury. I take back what I said about redheads. There are brunettes I could grab, too."

"Don't forget that the Dorn girl will be

sharing the same risks and sticking out her neck just as far. That doesn't mean I'd like to be in Carstairs' shoes. When an electric eel is bashed by a redhead, it means plenty of excitement."

"She doesn't look like an Amazon to me."

"She isn't. But Carstairs likes to plague her. I dropped in at the Gardens once, to get a story on a new plant that was all ears—a pink blob with almost human-looking ears sticking out from it. Carstairs was pacing the office, saying things I would never say to an unsophisticated girl."

"What happened?"

"She threw a wet-blanket fungus from Io at him. Boy, was his face wet!"

"I hear there's a kid on board that cruiser. A ten-year-old youngster. The Captain's grandson."

"Yeah. A kid that age shouldn't be going out to the Twelfth Planet but the Captain's a stubborn old bird. It seems that kid has been with him constantly for six years. He knows more about the outer planets than most old sky dogs know about the inner ones. He's been on about two hundred cruises. He's been to Pluto twice.

"He's an orphan, and the old captain has been father, mother and brother to him, all rolled into one. They're inseparable. You couldn't pry 'em apart with a charged gravity plate, and the I.B.I. isn't trying. They figure that a kid who can stand Pluto, can endure the gaff still further out. They say he's something of a prodigy."

"Well, Captain Garrett's the man for the job. He knows his way around the Eleventh Planet, so why not the Twelfth?"

The twelve small figures far below had disappeared into the ship, and space port mechanics were busily engaged in battening down the massive lids of the gravity ports. A clangor arose, drifting up toward the two newspaper men and dwindling in timber as it ascended. Drifting up, and becoming a thin wispy echo of sound which carried with it still fainter murmurings, as though a door in the sky had swung open on ineluctable thrummings from beyond the stars.

In the minutes which followed Ellet and Solury spoke scarcely a word. The clangor subsided, and the mechanics disappeared, leaving the ship bathed in the clear, translucent glimmer of cold light bulbs. Both sides of the deep, wide berth in which it rested were illuminated, so that even in the sunlight which flooded down over it it seemed like a phantom ship enmeshed in a dazzling cocoon.

Slowly the rocket platform upon which it rested began to tilt skyward. Higher and higher it rose till the ship resembled a radiant pupa dangling almost vertically from the horizontally projecting spar of the mooring pylon.

All the space below burst suddenly into flame. The flare of twenty rocket jets exploding simultaneously was so blinding the two film-men had to shut their eyes.

When they opened them the ship was gone.

CHAPTER XI

The Loneliness of Space

THE loneliness, the desolation, the chill vast emptiness of Trans-Saturnian space could not be assuaged by the Navigator's Manual, or described in chart-room curves.

The desolation was like a rain. It came down in slanting sheets. It came down in quivering films that whipped away into blackness. It came down with a gentle murmur, and a roar as of great trees crashing. It was dissipated like mist in the teeth of a gale. It was a terrible, lashing fury. It was as gentle as a cooing dove.

The loneliness was like a fog. It wrapped itself around everything and everyone. It was a clinging whiteness through which a hand could be stretched to clasp another hand. It was a solid wall of mist, utterly impenetrable, which could not be torn apart. It was a something that you could speak through in accents of despair. It was a warm friendly thing that wrapped itself lovingly about you, till it stilled the beating of your heart.

The emptiness was like a tomb. It was vast and filled with grave rot. It was small and narrow, and warm. It was so small and warm that it hardly seemed like a tomb, and certainly not an emptiness. It was more like a nothingness than an emptiness, a coziness underground.

The emptiness, the desolation and the loneliness were like men marching. Tall, silent men speaking not a word, marching up and down the passageways of the ship, and through you with cold lips unmoving.

Back and forth it seeped through the control room, and the chart room, and the sick bay—oh, the sick bay especially—and then down into the rocket rooms, and where the crew sat staring out through narrow visiports at a loneliness and a desolation that wasn't men marching at all, but something cold and inhuman from beyond the stars.

Carstairs moved to the edge of his bunk, and fumbled around with his toes for his slippers on the deck.

He found the slippers, slipped his feet into them, and stumbled across his sleeping compartment to a mirror on a bulkhead which showed him a face which he hardly recognized as his own.

There were dark half-moons under his eyes, and his features looked haggard and drawn.

A little impatiently he told himself there was no reason for the haggardness, although the loneliness and desolation had been with him for five weeks now.

There was no reason why he should feel such an emotion when Vera Dorn was with him, and his friends Greer and the old Captain, and Hilary's girl, and that fresh grandson of the old man who was always monkeying with his herbariums, and pulling his specimens apart.

The emptiness and desolation had to be wholly subjective, because the void beyond the visiports was no different than the void, say, between Saturn and Uranus.

He told himself that it was probably just knowing he was four billion miles from the Sun which had done this to him.

He dressed rapidly, pulling a loose-fitting leisure jacket down over his head, and drawing his trousers up over the slack. He threaded a belt of translucent elastex through the tabs at his waist, and drew it tight.

He returned to the bunk, sat down, and drew on socks and lounge shoes.

He got up, ran his fingers over his chin, decided he could do with a little less beard, and moved across the compartment to the pneumatic shaver. He thrust his face in, wedging his brow against the guard rest, and elevating his chin.

He felt the gentle caress of the roto-blades as the instrument disposed of his stubble.

Five minutes later he was walking down an intership passageway to the telltape room.

The door panel was ajar. He pulled it open, stepped inside and crossed to where Helen Hilary was sitting.

She turned around, startled.

She smiled when she saw who it was. The telltape was clicking. The luminous message tape was coiling between her fingers, for though the ship was no longer in communication with Earth, a few messages were still coming through from the Neptune Colony.

"Helen, would you—would you think it strange if I kissed you," he said. "I'm not in love with you, you know. But I've been lonelier than you'd suspect, and it might help. I'm not sure—but it might. I've always wanted to."

She looked at him. "Strange? You darned chump—"

Her arms went around him, her lips were warm against his.

SHE was smiling when he released her. Or had she released him?

"Feel better?"

Carstairs did. He also was a little dizzy.

"Thanks," he said, patting her shoulder.

Out in the passageway he told himself that his subconscious was plotting something more than just tripping him up. If he fell in love with two women at once—it was certainly possible—he'd have something to worry about when he returned to Earth.

He'd have to clamp down on the divided glow inside him when he thought of Vera, and then of Helen Hilary. He'd have to. Vera was too swell, and too loyal. The glow, when he thought of her, was brighter. It was just that—well, for a moment he'd needed to attack the loneliness from a different tangent. Now that he had, he felt better and almost cured.

He continued on down the passageway till he came to the small compartment where his specimens were stored. He had converted the compartment into a temporary crime research laboratory which was decidedly on the lethal side.

As he drew back the door panel and stepped inside, he found himself wondering if the sense of loneliness and desolation hadn't been a little heightened by a dread of what might be crouching or shambling through it when it drew to a tight, perhaps unbearable focus five billion miles from the Sun.

The Captain's grandson was sitting on one of the laboratory tables, his legs dangling, a translucent herbarium in his hand. The ferns inside the herbarium were all leaning in one direction, their mouths open, their fangs bared.

Leaning toward the little lad sitting there, the venom spraying up from them over the glass.

A cold chill fastened on Carstairs' heart, for he knew that if the nightshade had a mouth, and could spray its poison, it would not be one-tenth as deadly as were cobra-ferns from the bleak Eurydicean marshlands.

He had, perhaps, never moved quite so swiftly before, or with such tremendous restraint. For he knew that if he allowed horror to show in his glance the lad might drop the herbarium.

He simply smiled till he got close. Then he snatched the lethal cage, and set it down on a shelf out of reach of hands that always seemed to be getting their owner into mischief or disgrace.

The lad's name was Richard. There had been a Richard the Silent, in Captain Garrett's family tree, but the lad took after his uncle's favorite parrot.

"Aw, shucks," Richard said. "Did you have to do that? I know what they are—cobra ferns. One bite, and I'd have been a gone goose."

"You know that, do you?"

"Sure, I know. I read the labels on all the herbariums, and I've been looking at some

of your instruments. What's that one supposed to do? How does it work?"

The lad pointed as he spoke at a ten-foot, filmorecorder-like instrument on a low shelf just out of reach.

Carstairs breathed a sigh of relief. "Well, if you must know, that's a locator projector which works on the penetrant ray principle. It was not designed as a plaything for children. The inventor had no children of his own. I wouldn't advise you to meddle with it."

The Captain's grandson descended from the table, and walked stiffly to the door panel. Before stepping through it into the corridor, he turned and stuck out his tongue at Carstairs.

"I often wonder why people insist on having children," Carstairs muttered, as the door panel slid shut.

Five minutes later he passed Greer, who was on his way to the control room, in the passageway.

Greer's face was troubled.

"The old man's worried, Carstairs," he said. "There's a whorl in the visiscope that looks like the kind of splotch an egg, a hundred light years in diameter, would make if it was luminous, and you smacked it down on a hard object."

Carstairs looked startled. "That's his description of it, eh?"

"Just about. I may have left out a few cuss words."

"I'll take a look," Carstairs said. "Maybe it isn't dangerous. It might be a dark flame whorl with a luminous core. Sometimes they show up in the visiscope as just all core."

When Carstairs entered the control room Captain Garrett was bending over the visiscope. He heard the door panel slide open and turned a concerned face toward his visitor.

"Come in, John," he said. "I want you to look at something that just showed up on the plate."

CARSTAIRS nodded, crossed the room, and bent over the instrument.

Soon he straightened up, his eyes dark with anxiety.

"What do you make of it?" Carstairs asked.

Captain Garrett shook his head. "I don't know, John. I never saw anything like that before in space. Recognized phenomena sometimes play queer tricks, but at this distance identification is usually possible."

"What do our instruments show?"

"Nothing much. A slight shift toward the red, as though it had rubbed space the wrong way for a total of about one-millionth of a light year. A sweet little patch of interference on our gravity-shift integrators. A glimmering on the hull. It's distinctly luminous."

"I can see it is," Carstairs said. "Do you think we'll be disturbed by it."

Garrett frowned. "I wish I knew. I don't like any unfamiliar phenomena in space. I am, I suppose, superstitious. I've never been so far from the sun, and I don't like the feel of it."

"Neither do I," Carstairs said. "I have to keep reminding myself that eight ships went out to the Twelfth Planet and returned before we decided to send an expedition ship. None of the navigators saw anything out of the ordinary four billion miles out."

"I've bumped into a half dozen inexplicable things much closer in," Garrett conceded. "They're always turning up. What worries me about this one is its size. It's probably a sort of aurora in the ether. The electro-magnetic field can play queer tricks without any help from an interfering body."

"But a ship passing by doesn't know that," Carstairs said. "I hope we stay on the safe side of it."

"We'll skirt it by a wide margin, John. But if it affects our instruments we may be in for trouble. A dark flame whorl can exert a destructive influence for eight million miles. This may be a big cousin of a flame whorl."

Garrett smiled thinly. "It should be with us for at least thirty hours. I've a bottle of port in the cuddy that won't be in existence thirty minutes from now. I'd hate to have it disappear down just one parched throat, John."

Carstairs was reeling a little when he emerged from the Captain's cuddy a half hour later.

He'd enjoyed swapping space yarns with the old navigator and he'd enjoyed the wine. Not one shred of remorse showed in his eyes, though he knew that wine in space could make a strong man very sick.

A half-hour was a too brief time in which to swap yarns with a navigator like Garrett who'd spent more than forty years of his sixty-two outside the ring of the inner planets.

John Carstairs felt very pleased with himself. He felt elated, he felt like lifting up his voice.

Down the long, cold-lighted passageway he reeled, regretting that Garrett had been compelled to return to the control room because there were such things as electro-magnetic disturbances in the ether. It seemed outrageous to Carstairs that there should be disturbances of any kind outside the rosy glow that enveloped him.

Garrett had some extraordinary memories on tap. Once in a diving-suit on the floor of a shallow sea on the little Jupiter moon Io, he'd been attacked by a floating mass of eyes. The creature had been all eyes except for a translucent glimmering where its vast,

pouchlike stomach quivered.

He'd slashed at it with a sear-blade and sent it slithering into a crevice between two enormous rocks.

"I could see it staring out at me from the darkness, John. There were different expressions in each of its eyes—reproach, resentment, frustration, a cold anger, contempt, and—embittered resignation. I expect it knew it was no match for me."

Once Garrett had had to flee for his life from an enraged stilt-boxer plant on Ganymede. The creature was all thin legs and revolving arms. There were soggy puffballs on twelve of its fifteen very long arms and when they descended on a man's skull, he died.

CHAPTER XII

Life in the Void?

DIZZY and elated, Carstairs was almost at the end of the passageway when something jerked his thoughts from the gray Ganymedan mists through which Garrett had been fleeing to the vibrating bulkheads on both sides of him.

Something misty and fine-spun, a tenuous web of something floating down and half-obscuring the spiraling intership stairway ahead of him, met his view.

The tenuous flowing substance seemed to thicken as he stared. For an instant, as he swayed in the passageway, he was unable to believe that the shape floating in it was looking directly at him.

The shape was pale yellow, and it looked not unlike the face of a very old man hanging in the middle of the passageway in shimmering folds of the web.

The web was moving swiftly toward Carstairs now, advancing like a wave of the sea, and there were two faces hanging in the web with their eyes fastened on him.

It must be the wine, of course! But he'd never dreamed that a half-bottle of port could have done that to him.

There were three faces, now, swaying above him, floating down the corridor in the meshes of the web. They were very shriveled indeed, even for faces conjured up by his overheated imagination and the fumes inside his head.

Four faces suddenly appeared, bobbing almost directly above him. They were pale yellow in hue, with deepset eyes and pale star-shaped puckers where their mouths should have been.

He realized suddenly they were not faces at all. They were faces only to the extent that his imagination added to what was actually there.

They were simply shriveled ovals pulsing in the passageway, with two deep indentations spaced exactly right for eyes. Certainly they did not appear to be human faces when he stood very still and stared at them steadily.

Carstairs stiffened abruptly, his brain suddenly alert and cleared of fumes.

One of the faces had detached itself from the web and was swirling straight toward him, at the end of a shimmering thread, drawn out thin. With a soggy plop it collided with his face and went bouncing up toward the overhead.

He leapt back with a startled cry. Another face detached itself, whirled toward him. Something went out from it to fasten on his throat, a dangling clump of tentacle-like strands that tightened swiftly about his windpipe.

The same instant the face attached itself to his cheek by its puckered mouth orifice and he felt a prickling which suddenly became a sharp stab of intolerable pain.

Frantically he raised his hands and tried to tear the loathsome thing loose.

His hands merely tingled. There was no

[*Turn page*]

Can't Keep Grandma In Her Chair

She's as Lively as a Youngster—Now her Backache is better

Many sufferers relieve nagging backache quickly, once they discover that the real cause of their trouble may be tired kidneys.

The kidneys are Nature's chief way of taking the excess acids and waste out of the blood. They help most people pass about 3 pints a day.

When disorder of kidney function permits poisonous matter to remain in your blood, it may cause nagging backache, rheumatic pains, leg pains, loss of pep and energy, getting up nights, swelling, puffiness under the eyes, headaches and dizziness. Frequent or scanty passages with smarting and burning sometimes shows there is something wrong with your kidneys or bladder.

Don't wait! Ask your druggist for Doan's Pills, used successfully by millions for over 40 years. They give happy relief and will help the 15 miles of kidney tubes flush out poisonous waste from your blood. Get Doan's Pills. *(Adv.)*

actual substance to the horror, nothing he could sink his fingers in. He was suddenly aware that the first face had bounced back and attached itself to his left cheek. There were more tendril-like strands about his throat now, tightening in a hideous mesh like a noose.

He went reeling back against the opposite bulkhead, clawing frantically at his throat. There were ten new faces in the shimmering web at the end of the passageway. Five had detached themselves and were swirling toward him.

He dropped to his knees, tore and plucked at the things. The shriveled, hideous creatures were vampirishly clinging to his face and throat. More sharp, agonizing stabs of pain went lancing through his flesh.

Suddenly they were no longer clinging to him. Back along the corridor they rushed, having released their hold on his throat. Rejoining the others in the web, once more staring at him from above out of a glimmering veil that whipped suddenly around the end of the passageway out of sight.

Carstairs raised his hands to his cheek. The puckered mouths had drawn blood. His cheeks were bruised, swollen.

Swaying, feeling a little sick, he reached the spiral stairway and ascended with frantic haste.

He was sure, now, the web had entered the ship from the void. It had grown denser from both sides inward, as though from a continuous flowing through the solid metal bulkheads below.

What was it? Some strange form of life inhabiting the gulfs between the planets, infra-radiant, unbelievably tenuous, and yet capable of inflicting agonizing pain? It was an energy-eater. It had to be. There was no biological matter in space for it to feast on. Had it bruised his flesh incidentally, while seeking to suck the radiant energies in his body cells?

UTTER horror gripped him when he emerged into the passageway above.

The web was half way down the passageway, nebulously hovering before the door of Vera Dorn's sleeping compartment. It seemed to be passing through the door as he stared, bunching itself, contracting, drawing together with luminous quiverings. The faces extended completely across the passageway in an uneven row.

One by one the faces passed into the compartment, leaving merely a faint blur of radiance close to the door.

Carstairs raced down the passageway, tore at the door panel, and swung it open.

Vera Dorn was lying on the floor just inside the panel, struggling in the meshes of the web.

It had dragged her from her cot, and was tightening about her with all its faces clustering on her throat and face.

Carstairs sprang toward the girl, trying to grapple with the thing, to shove back the faces. Once more his hands sank into emptiness. There was nothing tangible there to tug on—nothing!

Suddenly even the nothing was gone.

Vera Dorn groaned, and clung to Carstairs, her body shaken by sobs.

Her face was bruised where the horror had fastened at least two of its hungry mouths, but she seemed more frightened than hurt.

"John, what was it? John, it was awful!"

He kissed her bruised cheek, smoothed her hair.

"It's almost unbelievable, I know—but I think it came from—a phenomenon which Garrett thought was in the electric-magnetic field. Life, Vera—infra-radiant life in the void."

She straightened in his arms.

The door panel had slid open and a little boy was standing there, impishly grinning.

The Captain's granson was hardly able to contain his glee.

"I read the instruction sheet attached to the locator projector very carefully. It seems to be quite as amazing an instrument as I've ever seen.

"Gee, imagine. An instrument that can find people through solid metal bulkheads and shoot a ray at them that looks like the organism on the projection plate, only enormously magnified.

Carstairs jaw dropped open.

"You—you—"

"I figured you'd be scared. I put a linked chain vampire fungus from Callisto on the plate and centered the finder first on you, and then on Miss Dorn. Gee, I looked at it through the back of the projector, magnified about six times. I can imagine how you must have felt."

Carstairs rose.

"I suppose you know that when it comes out the other end and travels on as a projection it picks up size. I suppose you read in the instruction that the three-dimensional projected image can burn! Bruise and burn! It doesn't have to be a chain vampire fungus. Just anything on the slide. The image always bruises on impact with a solid body. The projector is used to find and terrify criminals, and to stun them. You didn't turn it on full power. If you had—"

"Gee, I didn't!"

"You didn't," Carstairs said. "But that isn't going to prevent me from taking you across my knee!"

"No, John," Vera said, tugging at his arm. "It isn't done any more, remember. It leaves a psychic scar."

A change seemed to come over the Captain's grandson. A little of the impishness went out of him. He was gone before Carstairs could make up his mind whether to inflict a psychic tremor on his subconscious by whacking him where he sat, or to inflict one on himself by holding his anger in check.

"Well, you got a dose of your own medicine for once," Vera said. "I never thought it would be possible to project enlarged microscopic images through solid walls. It's ghastly—it frightens me. Suppose he'd put a drop of water on that slide."

"The magnification is only fifty times," Carstairs explained bitterly. "The largest microorganisms would come through no bigger than a pinhead. The Callistian chain-vampire plant is nearly a quarter-inch in length. It feasts on almost microscopic, pinkish, free-swimming algae in pools of heavy water.

"When you put one on your thumb it clings, and sucks your blood like a leech. That's because heavy water organisms won't give up their innards without a struggle. It's conditioned to exert pressure, and the pores of the human skin offer about the same degree of osmotic resistence. It's a true vampire plant, but the bruising came from the impact of the projected image on our flesh."

HE paused for a moment, smiling coldly. "The image merely opened and closed its mouth orifices at random on the slide, but when the locator centered the beam on us, that little imp passed the 'faces' back and forth over our faces, and we thought the actual plant was feasting on us. I should have suspected the truth when I tried to grasp it, and it wasn't there. The ray contact produced an almost identical physical effect, though it didn't draw blood."

"But those faces—did look human! Like shriveled old men!"

"A purely coincidental resemblance," Carstairs said. "Like the great rock faces you see in nature, or the wrinkled, puckered ones on an old hickory staff. The 'eyes' are really pollen cups, the nostril slits are moisture vents."

"John, the whorl was a dark flame variant." Garrett's voice came from the doorway. "It's begun to show the characteristic Kruger lines. The core is too far away to give us any trouble."

Captain Garrett was standing just inside the door panel, his eyes focused on Carstair's bruised face.

"Richard always comes straight to me when he's worried," he said. "He told me he was afraid you might be resentful."

The old man smiled at Vera Dorn. "You shouldn't have interfered, Miss Dorn. If ever a kid rated a drubbing he did. If he'd turned the beam on full force you'd be in the sick bay, and so would John. I—I'm afraid he won't be sitting down for a spell."

"Captain!" Vera Dorn cried, outraged. "You know what that does to a sensitive little boy's subconscious mind. It will leave a scar. He'll grow up hating you!"

"I don't think he will, Miss Dorn. He's a pretty intelligent little boy. Deep inside, he's a great kid and he doesn't hold grudges. He knows he rated a drubbing, and he'll be better for it. There's an old adage: 'Spare the rod and spoil the child.' I don't hold with it, Miss Dorn. I wouldn't use a rod, just a little vibration from the flat of my palm, no worse than he'd received if he'd been sitting on a spanking-plant. Are there spanking-plants, John?"

"I'm afraid not," Carstairs grunted. "Nature seems to agree with Vera. For myself, I don't know about the effects of spanking. I've never had to bring up a child."

As he spoke Carstairs was moving toward the door. "Greer told me a short while ago that we're about four and a quarter billion miles out. Twelfth Planet ought to be visible in the disk after another turn of the clock."

"Greer ought to know," the old man grunted. "He checks every calculation I make. He'd make a good navigator if he wasn't such a worrying sort of cuss."

"Our real worries will begin when we cross the Bronson heavyside," Carstairs said. "It's conceivable Parker has set up a disruption field projector on the planet. So far as we know, he carried no heavy equipment with him—just something light. But there are small, portable projectors capable of wrecking a ship."

"You and Greer have been mighty secretive about your calculations, Carstairs," the old man said, shaking his head.

"When a man does not care what he does to the world, measures have to be taken that won't give him an edgewise chance," Carstairs said. "There are some things you have to be fanatical, determined and relentless about. A man stalking a wild beast doesn't indulge in idle gossip.

"We made our plans after we walked out of a little hot bright room nine weeks ago in the I.B.I. Building in Washington. We left a criminal there who hadn't wanted to confess, Garrett. That criminal was named Malton. We haven't cared to talk about what he told us since."

Coming in the Next Issue

AFTERMATH

A Novel of the Future

By JOHN RUSSELL FEARN

CHAPTER XIII

The Horror on the Plain

RUNNING with his head thrown back, his face convulsed with terror, the man fled for his life. Behind him something that looked like a white, metallic toadstool was pursuing him over the plain.

The toadstool shape actually towered. It had emerged from a cluster of purple shadows on the almost featureless plain, and was chasing the terrified man on stumpy legs, its umbrella-shaped pileus contracting and expanding like a great, disembodied heart.

White-lipped, Carstairs lowered his binoculars, and moved closer to the viewpane of the hovering roto-cruiser. Through the binoculars the fleeing man's facial contortions had been distinctly visible, but the clear control room viewpane framed merely a glittering expanse of plain, and a pinpoint of blackness pursued by a white and hazy blob.

Captain Garrett had brought the ship down in a blazing arc, and would have made a perfect seven point landing if Carstairs hadn't called his attention to the moving creatures in the wide swath of radiance cast by the descending cruiser's headbeams.

The toadstool was still running and Garrett was glad he hadn't landed, even though the underjets were keeping the ship suspended four hundred feet from the plain on a cushioning mound of flame that threatened to melt his stern gravity plates.

By Carstairs' side stood Vera Dorn, light from the viewpane making a halo of her red-gold hair, her lips caught by her teeth.

She had seen him grow pale, his jaw tighten, and she was a woman, and there was a pair of binoculars in his hand. Without warning she snatched the binoculars and leaned against him so that he could not get them back until she looked too.

He had to support her while she stared through the binoculars in horror.

The toadstool was almost upon the fleeing man now. The man was zigzagging in his flight, as though hoping it would follow him back and forth over the plain like a snake.

It didn't. It went in a straight line, with continuous pulsings, and the faster he ran the more it gained. Vera felt as if she must scream out to him to look back and not be such a fool.

It gained and gained, and gained horribly upon him and still he continued to zigzag.

Suddenly the chase was over. The toadstool had flowed around him, and was slowly contracting. For a moment there were no more pulsations, only a hideous drawing together of its bulk.

Vera shut her eyes and bit down on her underlip. When she opened them the toadstool was standing motionless in the midst of a widening crimson splotch. The ground was splashed with red, and quivering flesh.

"Satisfied?" Carstairs asked.

"John, how can you be so callous?" Vera almost sobbed.

"Give me those binoculars!"

As he spoke Carstairs took the glasses from his secretary and raised them slowly to his eyes. For a long minute he viewed the scene. When he lowered them, his face was as grim as death.

"I was hoping he'd outrun the devilish thing," he said, gruffly. "There was no possibility of saving him from the air. The field would have deflected a searing ray."

He turned away. He didn't want her to know how he felt.

It might be well if she thought that he was a little callous. Then, perhaps, she would give up trying to change one side of his nature.

But Vera Dorn had a capacity for putting her fingers on the chinks in Carstairs' armor and pressing till he winced. She did so now, her pupils pinpoints of hot reproach.

"Why did you turn away?" she flung at him. "That ghastly plant killed him—as you knew it would. If you were unemotional, I could understand it. But you're not. You're white and shaken. You pity that poor devil as much as I do, because you're a man of kindly instincts, and suffering repels you."

"Well?" he said.

"Don't you see, John, what your crime work has done to you? Subconsciously you were fascinated by that poor devil's plight. If that hideous plant hadn't killed, you'd have felt cheated."

Carstairs slowly shook his head. "No," he said.

"It's true." Her voice rang out challengingly. "Why don't you own up to it."

STUNG by her remarks, Carstairs bit his lip. Her assertion had just enough truth in it to make him wonder if he wasn't a little worse than most imaginative people in that respect. Mysterious forms of life, and death lurking in ambush—death striking swiftly and terribly—did hold a strange fascination for him.

But he had always tried to prevent tragedies from happening. When they did happen he was fascinated, yes—like a man compelled to watch against his will a python swallowing a goat.

But he was on the right side of the fence. On the civilized side, and not out in the lush jungle himself. When he looked through a chink in the fence at nature red in tooth and

claw he was fascinated—yes. Fascinated as most people were by a body between the covers of a book. People who read detective-murder stories were fascinated by the jungle, too, and detective stories were still plenty popular on Earth.

No, he didn't think he was worse than most imaginative people in that respect. But Vera Dorn made him feel worse.

Almost he wanted to slap her face.

The strain of the past three weeks had done that to him, tightened him up inside until he couldn't trust himself to speak.

As he stared down, tight-lipped, at the blob on the plain beneath, snatches of former conversation returned to his memory. Almost he could hear Garrett's voice.

"Look, John. A green halo around Phobos. That's something you don't often see."

"We'll be in the zone of the asteroids tomorrow. Chances are we'll be traveling at a bare crawl for one solid week."

Then, a fortnight later: "There's Pluto, John. That black pinhead an inch this side of the Lynx."

Still later: "The Eleventh Planet doesn't look blue until it's an inch in width. You'd think there was a drizzle of misting rain out there."

"I've never been that far from the Sun and I don't like the feel of it!"

Then he remembered the last conversation.

"There it is, John! There's Bronson! That overripe plum hanging from the Lion's Skin, a little to the left of Rigel. Bronson! It's Bronson!"

No, Bronson hadn't given his name to the planet, but Garrett had forgotten he hadn't. The cargo ship skippers called it Bronson, and in his tremendous excitement Garrett had lapsed into the argot of the trade lanes. He'd forgotten in his excitement that Bronson hadn't wanted that kind of monument five billion, two hundred million miles from the sun.

Carstairs returned his binoculars to their case, and turned with set lips from the viewpane. It was dusky down there on the plain, where a pulsing fleshy horror stood above something that had once been a man.

Nothing now remained to prevent Garrett from making a perfect landing. No one would be burnt to a cinder when the cruiser spiraled down. Something would be burnt, but it wouldn't be a poor devil who hadn't had a ghost of a chance.

Garrett had descended to the rocket room, after setting the dial pointers to maintain an axial tilt of 56—8 point 3. Carstairs crossed to the control panel, stared with a strained intensity for an instant at the dial readings, convinced himself that the bank of instruments hadn't been vibrated out of alignment, and returned to where Vera Dorn was standing.

He took her hand, drew her toward him a little awkwardly and then fiercely into his arms.

"I know what's wrong with us. We've been building up tensions too long too fast. Probably it will get worse before it gets better. If it gets worse, out there, we can think of it as happening in a kind of distorted mirror. This is the way it stacks up when the glass is clear."

Her eyes were shining when he released her and strode out of the control room. She hadn't spoken a word.

There had been no need of further speech between them.

Few words were exchanged in the airlock chamber a half hour later, as eight grim-faced men prepared to go out into a cold and barren land.

The ship had settled down through the gaseous atmosphere and come gently to rest on the plain, destroying the plant that had towered there.

Now Greer, Carstairs and six I.P.I. men were going out!

They did not know whether or not there would be more toadstools on the barren plain. They did not know whether the subatomic heat lamps strapped to their chests would completely shut out the cold.

They did not even know if their oxygen filters would protect them from the atmosphere.

Laboratory experiments on the Earth had proved conclusively that even the absolute cold of the void could not penetrate an subatomic heat screen. Their oxygen filters were of the improved Silo-type, and had been worn by living men on Neptune and Uranus.

But they were not experimenting in a laboratory now. There would be no white-smocked overseers out there to assure them the heat screen would film even the soles of their boots.

They hoped it would, but if the cold broke through at any point, it meant disaster.

They hoped for the best.

Going out did not prove simple.

When the outer airlock opened the cold congealed the inner lock through a vacuum ten inches thick.

But Carstairs had no intention of surrendering meekly on the first mishap.

He raised the temperature in the lock chamber until it was possible for the eight men to pass through in single file without seriously scalding themselves. Perhaps later Garrett would be distressed when he saw what Carstairs had done to the inner lining of the outer lock.

But getting out was of paramount importance, after what they had seen.

CHAPTER XIV

The Great Cliff

FACES white and set, they stood on the harsh metallic soil just outside the outer lock, and stared about them.

"This is it," Greer said.

One of the tall, young I.B.I. men, Fred McNally, smiled.

" 'Like stout Cortez when, with eagle eye, he gazed on the Pacific,' " he quoted. " 'And all his men looked at each other with a wild surmise, silent, on a peak in Darien.' "

"This don't look much like Darien to me," someone retorted.

The lock had closed behind them, leaving them alone with the cold and darkness. Their headlamps cast wide swaths of radiance before them, keeping the desolation at bay. The cold could not enter the tight, warm circle of protective warmth cast by their heat lamps.

But when they moved out from the ship, and set their steps in the direction of a towering cliff wall six hundred feet ahead, the desolation, the cold, and the darkness walked with them. The desolation accompanied them like a padding beast, filling them with forebodings. The darkness cast a dismal pall on their spirits, and the cold was a lean, translucent figure holding a vibrating atom-riveter which it applied steadily to the outer edges of the warmth.

They'd seen the cliff wall all morning through the visiports of the low-flying ship, a continuous high granite ridge bisecting the almost featureless plain. They'd seen distant lights glittering at one narrow point high up on its ramparts and a faint rosiness where it sloped to meet the plain.

In the cruiser's headbeams streaming down they'd traced the course of the wall for miles, and then had circled back in the darkness till they'd seen the lights again.

Captain Garrett had blacked out the ship while sailing directly over the lights.

"There's nothing like vertical exploring, Carstairs," he'd commented. "You can just sit back and give your imagination free rein."

It was not quite noon on Bronson's world. The sun was a dull, red star on the far eastern horizon with a barely perceptible corona, and the Tenth and Eleventh planets, despite their nearness and enormous mass, the tiniest of moons glimmering in the depths of the day sky.

The heavens were clear, glittering with a myriad stars, and against that stupendous backdrop of constellations and misty nebulae, the towering cliff wall loomed dark and forbidding, its base completely black, and its summit reflecting back the glow in faint, ghostly patches.

The wall was at least a thousand feet in height. As the tiny figures on the plain drew near to it, features came into view which hadn't been visible from the roto-cruiser. Its high, dark face was crevasse-riven and scarred with striations which looked, from the plain, like the burrows of gigantic seaworms in underwater caverns "measureless to man."

Through the thin, slightly greenish atmosphere there was an eeriness in the way certain isolated sections of the wall appeared to shimmer and recede, as though the whole base of the cliff was honeycombed with tunnels. Some were square, some oblong, and a few semi-circular, extending so deeply into the riven rock strata they seemed to be fretting away its substance in intricate, dizzily revolving whorls.

Carstairs and Greer led the cliff-dwarfed procession, clumping along side by side on the barren plain. They looked not unlike small black beetles with luminous eyes, walking upright and stopping from time to time to gesture and make clicking sounds.

In a matter of minutes Carstairs' expression had changed. He looked drawn and somewhat paler than when he'd stepped out through the airlock. The others, too, had tightened up inwardly. There was awe in their eyes, and a mounting tension as the slender hull of the roto-cruiser fell away behind them.

"You'd think the cold would have congealed that toadstool," Greer said, stopping an instant to readjust his oxygen filter. "How could a plant survive such weather, Carstairs?"

"But the entire Uranian flora can survive a temperature around 190 C.," Carstairs replied, the thin atmosphere giving a crisp, crackling quality to his voice. "It can't be much colder than that here. Plants can't survive without nitrogen, and nitrogen freezes up at just about the freezing point of oxygen. The old man's reading said One-eighty C., but conditions close to the ship may not have been typical."

"Yet how could a plant endure such cold?"

"There's hardly any moisture in the Trans-Saturnian fungus growths," Carstairs said. "And they have an outer skin which protects them against a dry cold well below the freezing point of oxygen."

"It's dry here, eh?"

"I'll say. There isn't a trace of water vapor in the atmosphere. If there were, it wouldn't be in the atmosphere. It would be a solid sheet of ice under our feet."

"Would it be better for us if it were a wet cold, Carstairs?" Greer asked.

CARSTAIRS frowned. "It wouldn't matter. We've no protective skin, and if a flaw developed in our heat lamps we'd have to be dry inside like an Uranian fungus to survive without evolving one. And you can't evolve that kind of skin in—well, six seconds."

Greer clumped along for a moment in silence, while the cliff ahead slowly began to block out the sky.

"There's no liquid oxygen here," he said suddenly. "Yet there's enough gaseous oxygen in the atmosphere to enable us to breathe when our filters dampen out the poisonous gases. How's that?"

Carstairs snorted. "Good grief, Jim, haven't you read Glissom's Theory of Warming Molecules. In a cold, such as this the oxygen in the atmosphere is 'protected' by the other gases. It can't liquefy, let alone freeze."

Greer fell silent again. For so long that Carstairs turned with an abrupt gesture. "Heck, Jim, I didn't mean to—"

Greer smiled thinly. "Forget it, John. I'm no thermophysicist. I was just remembering something that isn't in Glissom. Do you suppose that running toadstool was—one of Hilary's mutations?"

It was Carstairs turn to be silent. He was silent so long, Greer turned.

"You do, eh?"

"I don't know," Carstairs answered. "It could be a native. There are at least a dozen perambulating plants on Uranus with the same kind of heart-shaped pileus. There's even one on Neptune—an inch-high, blood-red cryptogamite that could pass for its little cousin."

They were almost at the base of the cliff now, approaching a cavern entrance of irregular outline which loomed like a gigantic hollow hand on the weather rock surface before them, a hundred feet above the plain.

Up a steep slope toward it they climbed, their headlamps casting wide swaths of radiance on the gleaming soil. Their eyes were fastened on a darkness filled with a hideous suggestiveness. Almost it seemed to be beckoning them on.

Five minutes later they had let themselves down into the blackness and were advancing cautiously between towering stalagmites which glowed with a faint, eerie radiance.

The floor of the cave sloped gently and was as smooth as polished glass. From subterranean cavern to subterranean cavern the eight men passed, marveling at the weird beauty of the rock formations overhead, and the gargoylesque shadows cast by the stalagmites on the mirrorlike cavern walls.

Deeper and deeper into the darkness they passed, through room after room in a series of vaults which seemed endless and sloped continuously downward.

Like Alpine climbers on the far-off Earth, linked hand in hand, moving slantwise along the glassiste walls, and then forward in single procession as new rooms opened out, and more marvels sprang into view.

They were advancing slantwise when a warning cry from Greer caused all eight men to stiffen.

"There's a drop here!" he cried. "Stay where you are for a minute."

Greer was standing on the edge of a darkness so wide and deep his headlamp cast merely a thin pencil of light down through it. He grasped a projecting stalactite, and leaned out over the drop, tilting his forehead clamp till the light bored almost vertically downward.

The glow fell on the strands of a weblike something that glistened in the thin beam.

Carstairs moved close to Greer, stared down over his shoulder. Greer was crouching and leaning out further than Carstairs would have cared to do. He was trembling a little.

When Carstairs' headlamp converged with that of the I.B.I. man, a wider, brighter beam slashed down through the darkness and converged upon an enormous web, so intricate and shimmering in texture it dazzled his eyes and made his brain reel.

"My stars!" he exclaimed.

"A spider web, John?" came in a stunned whisper from Greer. "Insect life—I mean, an arachnid—big enough to spin a web that size—would be—something special, eh?"

He was speaking between gasps, like a man in a fever cabinet.

"That's an understatement," Carstairs answered. "But what I just said about the cold doesn't hold for—fauna. There couldn't be any—this far from the sun. A plant must have spun that web!"

ONE of the men behind them spoke. "What in blazes are you whispering about?"

"Yeah, what's down there?" said a second man. "Don't keep up in suspense."

"It's all yours," Greer snapped, swinging himself back, and letting the two men who were next in line, crowd past him to the edge of the drop.

Carstairs also flattened himself against the cavern wall, until the others had moved forward.

"Holy smokes!"

"A spider web!"

"No spider could have spun that web!"

"How about it, Carstairs?"

"Your guess is as good as mine," Carstairs said, cripsly. "No spider could have spun it, but I wouldn't want to be around if a spider had."

"Whistle and it will come to you," someone suggested.

"What's that? What will come?"

"The poor fellow who was killed never knew. I'm quoting from a twentieth century writer of horror stories. Something came, but he never saw it. Neither did the author. There could be things down there even worse than that."

Seven pairs of eyes converged suddenly upon Carstairs.

The Curator of the Interplanetary Botanical Gardens had unrolled his shoulder pack and was kneeling at the edge of the drop, busily engaged in fastening the hooked end of what appeared to be an almost transparent rope ladder to one of the projecting stalagmites.

"What the blazes is that, John?" Greer demanded.

"A Ganymedan ladder fungus," Carstairs explained. "It's probably the most attenuated plant in the Solar System. I'll admit it doesn't look as though it could support a six-year-old child. As you can see, the tendrils are as thin as fine wires. But—well, I don't think that web down there is any stronger. Natural webs are always strong. In relation to size, that is almost unbreakable."

"Do you expect us to trust ourselves to anything as flimsy as that? Good heavens, Carstairs, before you unfolded it it occupied a space ten inches square!"

"You noticed that, did you?" Carstairs said, pausing an instant to tap the small metal herbarium which had contained the now greatly extended growth. "Well, that's perhaps the most interesting thing about it. You couldn't fold up a rope ladder eighty feet in length and carry it in a shoulder pack."

"No, you couldn't," Greer admitted. "But people still use rope ladders when they don't want to break their necks. They may take up a lot more space, but there's no gravy in saving space when you're falling from a height."

"The ladder fungus is unbelievably strong because it's a weblike plant," Carstairs said. "It has a ladderlike appearance because on Ganymede weblike structures with long vertical and short cross strands are the most effective kind of 'fly traps'.

"The treelike growths are two hundred feet in height, and there isn't much space between them. In the rain forests the ladder fungus occupies that space. Its prey is the only known flying plant—the winged Regrun root. Regrun roots are a little heavier than men. When the ladder fungus traps a Regrun root it contracts and begins to feast. It doesn't look like a ladder then."

Greer paled. "You mean that one might eat us."

"Only the Regrun root touches off the adaptive mechanism," Carstairs assured him. "The Regrun root gives off a peculiar stench."

Greer's lips were tight. "If you think I'll descend on that ghoulish thing you've got another think coming. I'd rather shinny down the projections on the walls."

In grim silence the eight men descended the ladder fungus, and glanced about them. They were in a larger room than any of the ones through which they had passed. Above them hung the shimmering meshes of the enormous web, and beneath it stretched a series of roofless caverns stretching in a straight line downward for hundreds of feet.

"How far down do you suppose these caverns go?" Greer whispered.

There was something in the silence which chilled them, and the sharp, metallic way the walls echoed back their speech when they raised their voices, was infinitely more unnerving that echoes in an Earth cavern would have been.

"There's only one way to find out," Carstairs said.

IN utter silence the eight men resumed their slow progress downward, clumping across the big room, and into a smaller one, and down on through that in single file, their headlamps casting wide shafts of light on the gargoylesque rock formations overhead.

They were five rooms below the web when a startled cry from Greer rang out in the silence.

"For the love of Pete, Carstairs, what is that?"

Eight headbeams crisscrossed in the darkness, bringing into light-splotched relief a thing that halted Carstairs in his tracks with thumping heart, as though it threatened to tear loose from its moorings, and were trying to force its way up into his mouth.

Towering directly in the path of the suddenly halted procession was a vast, winged shape. Translucent, Gargantuan, it was cicada-like thing with stalked eyes and hideous tendrils that had twined themselves around the crumpled, broken man in its clasp, and hideously torn at his flesh.

The man was dwarfed by its bulk. He was dwarfed, and—he was dead. His face was a shrunken mask, blackened, hideous. His tongue protruded, his head lolled, and where the tendrils of the horror had embedded themselves in his flesh his blood had flowed out and congealed to a dull red crust.

Someone uttered a low, choked cry. Then, with whiplash sharpness, Greer's voice rang out again.

"Fire at it! Fire—quick!"

Behind Carstairs there was a sudden shuffling, followed by gasps from clenched teeth, and then blasticks raged out in the darkness, filling the cavern with a dull echoing roar.

When the roar subsided there was a ghastly, stunned silence.

CHAPTER XV

Gruesome Discovery

ENERGY, swirling from the death-spitting weapons, had toppled the great shape sideways, and blown off its head. But towering just beyond it in the light-splotched gloom was another huge, cicada-like shape, its tendrils embracing the torn and congealed flesh of a second dangling form.

For an instant horror hammered all eight men into silence. The blasticks roared again. Flames tore and spat at the thing, twisting it around, melting away its substance.

Behind it three more shapes towered, their translucent wings outspread.

Suddenly Carstairs was shouting, waving his arms.

"Hold your fire! Hold it—those things aren't alive! Look! Can't you see—"

Two more shots rang out in the gloom, followed by a sickening thump as something that wasn't a plant spattered against the cave-wall opposite.

For an instant when the din subsided Carstairs stood leaning against a stalagmite, tears beclouding his eyes. He had recognized all five of the broken human figures. O'Hara had been almost as close a friend as Hilary!

"O'Hara?" came in a choked whisper from Greer.

"Yeah, it is. That one's Andy McFall."

"McFall. O'Hara has two kids, eh?"

It had taken Greer a little time to overcome the horror which welled up in his chest and almost choked off his breathing. When bitterness and sympathy surged through him he was not much given to words. He'd known O'Hara too, though not as well as Carstairs.

Carstairs was on his knees now, examining the shredded remnants of the monstrous shapes.

"These are not living plants," he said thickly. "They're just empty, discarded shells. The creatures must grow by shedding their outer skins."

"You mean to say an empty husk could kill?"

Carstairs' lips were white. "The living plants must have attacked those poor devils, and then slipped out of their outgrown body-sheaths," Carstairs said.

"My gosh, John!"

"You mean they moulted," came in a hoarse whisper from one of the I.B.I. men.

"If you want to put it that way. The correct word is ecdysis. They left behind a complete shell-imago, precisely the way certain insects do."

Sweat gleamed on Greer's forehead and Carstairs' lips were tightly drawn when the procession got under way again. The nerves of all eight men had taken a terrible pounding.

Steadily down through cavern after cavern they clumped, in a darkness broken only by the glimmer of their headlamps on the tunnel walls. All about them the roof gargoyles grimaced. The sight of the twisted and light-distorted shapes which kept appearing in the caverns ahead, caused them to pause occasionally and round each turn with their hands on their blasticks, and their breaths coming in quickened gasps.

They were at least forty rooms below the web when they saw the glow. It appeared suddenly, and grew in brightness, a steady, suffuse radiance which completely filled the cavern.

The glow was accompanied by a low, murmuring sound which was barely audible at first. But it grew steadily in volume as they continued onward. Soon it was so loud and turbulent that it brought a chill to their hearts.

Thousands of voices murmuring in unison in a hollow bowl deep in the earth might have made such a sound. But how could there be thousands of voices murmuring on the Twelfth Planet?

It required resolution to enter the next room, for the murmuring was now chillingly near. Closely set stalagmites made the entrance to it doubly difficult. But enter it they did, and across it clumped in single file, to stand at the edge of a drop that overlooked a vast underground chamber filled with a pale green radiance.

The walls of the great cavern were almost vertical, and ridged with granite outcroppings and rectangular terraces.

But it wasn't the vastness of the chamber or its cavernously honeycombed walls that filled the eight with sick revulsion, and caused them to crouch down behind the stalagmites at the edge of the drop with suddenly tensing nerves.

It was the hundreds of little dark shapes that filled the cavern to overflowing, filled the floor solidly, and clustered on the larger outcroppings, and stood writhing and gesturing on the little terraces that jutted out from the mouths of innumerable tunnels.

THE shapes were brown-bodied, rootlike, with thick muscular trunks. When they waved their arms a crackling ensued, which was somehow nauseating, like millions of cinch bugs rubbing their wings together, and plotting a predatory excursion.

On one of the outcroppings, high above the floor, stood a solitary plant that seemed to dominate the others.

The root shapes writhed and murmured

and swayed, and listened to their leader.

On a high rock outcropping at the far end of the great cavern the plant leader stood, screeching and making Corybantic gestures.

Its plant audience responded by waving their long tendril arms and quivering with emotion.

On all sides of them the cavern wall towered and from all sides the screechings of their leader came echoing back, causing them to redouble their squirmings and even to wrap their quivering tendril arms about one another.

Hunched and hideous was the leader and hunched and misshapen its audience. Root things with almost human faces and little slitted eyes agleam with malevolence, and a cohesive, terrifying something which bound them to the plant on the outcropping as it screeched and ranted and paced slowly back and forth.

"We are armed and we are ready!" the plant leader screeched. "And Parker is our maker."

"Parker is our maker," came from the swaying, chanting audience of plants shapes filling the vast echoing cavern.

"He leads, we follow!" the plant leader screeched. "Everything has been planned."

"Everything has been planned," came from the audience.

"He will lead us to victory."

"He will lead us."

"But first we must exercise patience."

"We must exercise patience."

"We are drilled and trained. We are ready."

"We are trained! We are ready!"

"Parker is our maker!"

"He planted us!"

"We are his seeds!"

"That which Runs in Darkness and That Which Flies and Grows Ever Larger are also Parker's seeds."

"That Which Runs in Darkness and That Which Flies are also Parker's seeds."

"Five evil-makers came, walking slowly, hating us, defying Parker. O'Hara, McFall, Moore, Simpson, Bell—evil-makers. By Parker were they destroyed."

"Parker is our maker."

"We are his seeds!"

As Carstairs stared down into the vast cavern a sickness gripped him, a revulsion of the spirit such as he had never known. Five billion miles from the sun an ancient pattern had repeated itself, an ancient horror had grown.

Literally it had grown!

The faces of the men crouching at the edge of the drop were tight grim masks.

"Wipe it out!" came suddenly from Greer, his voice ringing out in the gloom.

The others did not appear to think the command abrupt, nor were they unprepared.

Out over the edge of the drop floated twelve weighted lighter-than-air glass pellicles. Out they floated—and slowly down.

There was a dull flare as the first one exploded, ninety feet below. Then flares appeared all over the vest, dim cavern. A white haze drifted out over the writhing, chanting multitude of plant shapes.

It swirled and eddied about them, and then drifted up over the plant leader on his high rock platform.

All over the vast, dim cavern the fanaticism and malevolence went out of the slitted eyes of the plant things to whom Parker had promised a world.

The cavern was hideous with their cries as they went down, their bodies writing and twisting, their faces blackening in the swirling curtain of corrosive gas.

As they writhed and died something gentle like the patter of distant rain seemed to sweep up toward the white-faced men crouching far above, as though from deep in the hollow vastness of Bronson's world a new world was coming to birth.

The stalagmites between which they crouched no longer glimmered in the light from their headbeams. A shadow had fallen upon them, but so gently it seemed like a kind of benediction on the necessary destruction that had taken place.

IT was gray, and it flitted about and only slowly became a shadow such as a man might cast moving down through the rooms above with his shoulders held straight.

The shadow on the stalagmites was suddenly black.

"They grow to maturity in six weeks," a cold voice said. "But the leader was exceptional. He will be difficult to replace."

Greer turned with a startled grunt. The others swung about more slowly, but with less restraint.

There were curses, and an attempt was made to draw a blastick, which was stopped by a warning cry from Carstairs.

"No, Clyde. Hold it!"

John Parker's tall, erect body was clad in a loose-fitting cello-suit, and his snow-white hair jutted out from his temples on both sides of his circular helmet.

He seemed almost ludicrously encumbered. The subatomic heat lamp strapped to his chest was heavier and larger than the one Carstairs wore, and the weapon in his hand was heavier than the lamp. Only a man with a wiry strength in his wrist could have held it so levelly trained on Carstairs as he spoke.

The weapon was a Teck disintegrator, and there was nothing ludicrous about what it could do to a man if it went off by accident or design in front of an open space.

"Careful, all of you," Parker warned. "If you move, I'll blast. I know who you are, and I know what you did to Malton on Earth. You kept him in a bright room until he blabbed, didn't you?"

He was looking at Carstairs as he spoke.

"Those were—Hilary's plants?" Carstairs' lips were white.

"Yes," was the immediate response. "After what you've seen, I don't need to tell you that Hilary's experiment was a complete success. A rootlike plant with a big brain pan can be unbelievably intelligent. In six weeks it grows to maturity. It is cunning, adaptable, quickly learns to obey instructions, and believes everything it is told."

He nodded. "I can grow thousands more. On Earth I would have been spied on, interfered with. But out here I've fitted up two roto-cruisers with plant stoves, and will grow them by the thousands. I'll need a year—two at most."

"To accomplish what?" Carstairs asked.

"Didn't Malton tell you? Surely he talked—in the bright room, under the intolerable glare? Didn't he tell you I have a powerful transmitter here, and can talk with the Neptune Colony. I'm not cut off. I know what's happening on Earth.

"You saw what one of Hilary's plants could accomplish. Before you destroyed it, Malton had taught it to do the work of a dozen secret agents. The documents it stole from high Government officials in Washington will enable me to undermine confidence in all the governments of Earth."

Parker's voice had taken on a steely hardness.

"But that's just the beginning. A hundred thousand plants that can survive on little nourishment, endure extremes of heat and cold, can lie concealed and inert for long periods, and climb and can run and leap with ten times the agility of a lemur, will enable me to break down all organized resistance. They'll disrupt communications, destroy power plants, do the work of a million Fifth Columnists."

"Fifth Columnists?" Greer grunted.

Parker stared at him with withering scorn.

"In the Second World War the Fifth Column was an arm that moved in darkness. Its weapons were murder, intimidation, blackmail. I shall loose an unimaginable destructiveness upon the world."

"Why do you wish to do that, Parker?" Carstairs asked softly.

Not a muscle of Parker's face moved. He stood regarding Carstairs for a moment with a curious, withdrawn look in his eyes, as though the question had turned all of his wrath in upon a memory that had seared and burned a livid trail of hate across his strange, inhuman mind.

"Because," he said slowly. "I am like no other man."

For an instant Greer didn't understand, couldn't grasp it.

Then Carstairs spoke.

"Maile!"

And Greer knew.

"Yes," Parker said. "I am Maile."

"Then the man we burned down wasn't you?" Greer faltered.

"He was an experiment—nothing more."

"You mean he wasn't human?" Greer's voice was thick with horror.

MAILE grimaced pallidly. "Yes, he was human—a hired puppet. I wanted to see just how much I could accomplish with a puppet who called himself Maile. I was a little curious to see if my name could still inspire terror."

"But his fingerprints! We compared them with yours, taken when you were a child."

Parker's eyes left Carstairs for a minute, concentrating on Greer.

"When a competent surgeon transfers fingerprints by the Bensom grafting process there is no scarring." Parker's lips coiled in derisive scorn. "No scarring at all. As for that child—he was a little savage who fought and kicked and screamed because he knew himself to be entirely sane, but a monster, despised and hated by everyone."

Parker paused a long minute. "I do not like to be reminded that I was once that child. I now know how to hate, because, like Zarathustra, I have passed beyond good and evil, and have ceased to dread humanity's scorn."

There was something in his voice which would have been revealing even if Carstairs had not noticed how strong his wrists were, how levelly he held the massive disintegrator. The wrists of the child Maile had been as strong as steel bands. Now as the man Maile spoke his voice was savagely petulant, like the voice of that strange mutant child.

"There are fifteen hundred million puppets on Earth, and the human race, despite its foibles, has a rare gift for adjusting itself to disagreeable realities. It will soon learn to dance to the tune I set. It will readily enough accept a puppet master."

It was a mutant. It had an I.Q. of 310. It could mentally leap and climb and run with ten times the agility of a man.

Its parents had been perfectly normal people.

Yet it had been a monster—a child with a look in its eyes that other children did not have.

As a child its impatience had taken the form of killing one of its playmates. As a man it had become this.

Carstairs suddenly knew this creature was a greater horror than the one in the vast

cavern behind him. That plant horror could be destroyed, overcome, because it was stupidly brutish and blindly obedient, an instrument, and not a departure.

The departure was here in this soft-spoken, outwardly cultured man who was inwardly aflame with an unquenchable lust for power, and was in the depths of his soul infinitely more of a beast.

The eyes of the beast were blazing now. It stood revealed, exposed, recognized, understood, and there was something in its gaze which had not been there an instant before.

"I am like no other man," it had boasted.

It should have said: "I am not human at all."

CHAPTER XVI

The Web Is Broken

PALE with horror, Carstairs stared at Maile.

"You killed O'Hara and all the members of his party," Carstairs heard himself saying in a flat voice.

"Naturally I had to dispose of those prying fools. But I didn't blast them down. I just shattered their heat lamps. You've seen the flora of this planet. They are winged and perambulating plants with heat-resistant skins—air-eaters. Doubtless you thought that Hilary created those monsters."

Parker's voice was cold. "He didn't create them, Carstairs. They're indigenous. They feast on the nitrogen in the atmosphere. But there is also nitrogen in human tissues, and when they can get that, they are cannibalistic."

"You devil!" Carstairs cried.

"Heat lamps keep them at bay, but when they scent a frozen morsel they're as rapacious as—well, jackals."

He was speaking in the calm, measured accents of science. He plainly was keenly interested in the botanical curiosae he was describing. But his eyes never left Carstairs' face, and Carstairs knew that his time was short.

Still crouching, making no attempt to rise, Carstairs suddenly balled his fist, and brought his knuckles down sharply on his right knee. It was a gesture such as an angry man might well have made on finding himself helpless, thwarted, with every avenue of escape cut off.

For an instant alarm glinted in Parker's pupils and his fingers tightened on the trips of the disintegrator.

But he did not blast.

Carstairs' knuckles abruptly began to gleam. From them a ray of light, so thin and piercing it was more like a luminous filament shot from a micro-gun than a true beam, spanned the twelve feet which separated the two men, and came to a glittering focus on Parker's chest.

The splintering crash of a shattered heat lamp preceded the roar of Parker's disintegrator by less than a fiftieth of a second. But Parker's screams were already dying into silence when the roar of the blast subsided.

His face had congealed and blackened. As he went staggering backwards, his fingers froze to the ponderous weapon, and then broke off like the arms of a brittle echinoderm.

A portion of the cavern wall directly above Carstairs had fallen with thunderous echoes into the cavern below, but he did not even swing about to glance at the ragged hole the disintegrator had torn in the charred rock strata above him.

His gaze was riveted on Parker, congealing to a blackened, brittle shell in a cold that had brought an unimaginable destructiveness to his human body, and cold, inhuman mind.

After a moment the horror that had been Maile and later Parker, ceased to jerk about between the stalagmites.

The malign mutant was dead.

Returning across the plain to the ship, Greer decided not to question Carstairs about the almost microscopic mold he was no longer wearing on the third finger of his right hand.

He could see that the tiny herbarium was cracked, blackened, the heavy ring in which it had been set fused to a solid lump above Carstairs' knuckle.

The ring was ruined, and could never be worn again. As for the mold—well, it was ruined too, but a microscopic plant capable of smashing a subatomic heat lamp at twelve feet was certainly no slouch in the power field.

A Titanian microvolt mold, Carstairs had called it. Its enemies were shambling perambulating plants, with anteater-like mouth parts—plants that looked like traveling cranes.

It had to burn itself out to shatter them, dying anyway, the way certain insects did on Earth when they used their stings to deal out death. A violent jar, and its stored-up energies shot out in a thin filament-sting that could only be used once. The little magnetized herbarium embedded in Carstairs' ring had kept the sting polarized. But when Carstairs had smashed the glass, the stuff had acted.

Greer's thoughts returned to the cave. He could picture a hideous and enormous winged shadow descending.

He hadn't seen the shadow, but he was grimly certain the congealed, twisted form they'd left lying there would sooner or later tempt the greedy, nitrogen-craving cicada-shapes from their lair.

That Which Flies and Grows Ever Larger. There could be no doubt at all that Hilary's ghastly plants had thought the cicada-like fungus a sort of plant bogy man, infinitely more malign than themselves. It was ghoulishly ironic that Parker had claimed credit for it, and the plants—believed everything they were told.

WELL, he'd breathe easier when they'd located the two roto-cruisers Parker had transformed into spawning stoves, destroyed the root embryos, and arrested the nine men who'd left Earth with Parker long, long ago in an exhibit the I.B.I. had prepared.

Ten weeks ago!

Now that the tension had lifted, Greer wondered if he shouldn't tell Carstairs. He wanted Carstairs to know just how he felt about Helen Hilary, and that he shouldn't have kissed Vera Dorn.

It wasn't going to be easy getting Carstairs to understand. But before they blasted off for the green hills of Earth he wanted Carstairs to know how he didn't feel about Vera Dorn.

"John," he said. "Maybe I rate a sock in the jaw, but there's something I've got to get off my chest. You know how tensions build up at the end of a long trip, especially when you're working on a case that isn't all sweetness and light."

Carstairs turned his head, and looked at him.

"I know," he grunted.

"John, just before the old man banked down I got to thinking of Helen Hilary. We've hardly exchanged a word, but I'm in love with her. Does that sound crazy to you?"

"Why should it?" Carstairs replied, though there was a look in his eyes which made Greer realize the announcement had given him a jolt.

"Just two or three brief glances, and any man under ninety would feel like a tea kettle fungus serenading a wedding cake," he said. "How does she feel about it?"

"I don't know, John. I should have asked her when the tension got almost unbearable. Instead, I asked Vera if I could kiss her. There was just enough glow when I thought about Vera to—well, sort of ease the tension."

Carstairs turned pale. "There was, eh?"

"Don't get me wrong, John. I'm not a kiss-and-tell fellow. But this is so complex and important I've got to be absolutely honest about it. Vera would want me to. There was a glow, but it's gone out. Helen's the girl for me. I just felt it should be cleared up. Vera's in love with you, but—well, she sort of felt the tension too, I guess. And sometimes when you're looking through a comparison microscope you're a colder fish than I could ever be."

"You think so, eh?"

"Vera tells me you are. Sometimes she broods about it, and that isn't good, that builds up tensions. I'm telling you what happened, because if Vera should ever mention it I want you to know there was nothing to it."

"She didn't tell you where to go?" Carstairs almost groaned.

"No. When I asked her she just said, 'Don't be a chump, Jim.' And after I'd kissed her I think she said, 'Feel better now?' Or something of the sort. But it was just space tension, John. Nothing to it."

Carstairs seemed to be having a struggle with himself.

"Okay, Jim," he said finally. "Thanks for telling me. I guess maybe space tension could do that to some people."

THEY both saw it at the same instant, a nebulously weaving spiral of radiance creeping around the stern of the ship, and in its wake—eight small, cumbersomely-clad figures armed with Teck disintegrators and clumping slowly toward the airlock with their shoulders held straight.

For perhaps a dozen seconds Carstairs and Greer stood as though paralyzed, their eyes on the looming hull of the roto-cruiser. Then their blasticks swept out, and they jogged forward across the plain, their voices raised in frantic shouts.

"Hold it till you're within firing range!"

"Hold it, men! Fan out!"

The clumping figures did not turn about. Three of them had halted directly in front of the airlock, and were aligning their ponderous weapons on the cruiser's stern gravity plates.

"Carstairs! They'll blow the ship apart!"

As Greer's voice rang out something that looked like a luminous wraith detached itself from shadows close to the hull and swirled out toward the circle occupied by the attacking group in front of the airlock.

It billowed back and forth like a wave, towering as it swept out toward them.

With hoarse shrieks the eight figures dropped their heavy weapons and went reeling backward.

Almost simultaneously the I.B.I. men came within firing range.

Eight blasticks raged out, streaking the darkness with livid spurts of flame. Smoke swirled and eddied about the stern of the cruiser as the figures crumpled, and were

jerked about on the plain by their congealing muscles, and spasmodically twitching limbs.

The firing haze slowly cleared, revealing frozen bodies and ponderous disintegrators, lying at grotesque angles before the airlock. The gliding shape had remained hovering close to the ship, and for an instant through the swirl of smoke it loomed snakelike and gigantic, its hood pulsing, its forked tendril tongue darting in and out.

It exploded suddenly, with a dull orange flare.

"A cobra fern!" Carstairs choked. "Rayed out through the hull of the ship. That darned kid is incorrigible!"

They were close to the airlock now, standing in the circle of crumpled forms and exchanging somber glances. Carstairs' blastick had stopped smoking.

"John, this just about winds up the file," came in a hoarse whisper from Greer. "We know that nine men came out here with Parker. The fellow who was running from the toadstool when we banked down wore the same kind of headlamp Parker had on. There are eight here. It looks as though we had some unfinished business, but the old man's grandson took care of it for us."

"If he hadn't, we'd be standing by a blackened hull with smoke spiraling up from it," Carstairs answered.

"That cobra fern was only about two inches tall, eh?"

Carstairs nodded. "On the locator slide it was. But when it came out as a projected image it was magnified fifty times. I'd warned him about cobra ferns, but when he saw those rats approaching he must have lifted one out of the herbarium with a pair of forceps."

Greer was staring at the nearest of the crumpled figures.

"It just goes to show a kid doesn't have to be a mutant to have what it takes," he said. "If there was some way of feeding him growth hormones, I'd ask him to sign on the dotted line."

The outer airlock was thrumming.

"I'll be glad when we're back where there's mountains to climb and rivers to cross," one of the I.B.I. men grunted, breaking the tension.

EPILOGUE

NONE of the friendliness, the warmth, the bright and cheering camaraderie of Trans-Venusian space could be expressed by a Navigator's Manual or described in chart-room curves.

It was like sunlight after rain, slanting down in glowing, golden shafts. It was like music stealing gently out of a silver horn.

"John," Vera Dorn said, watching the green disk of Earth growing slowly larger in the control room viewpane.

"Yeah, what is it?"

"Don't snap at me. I was just thinking. If Jim and Helen can behave the way they've been doing without seeming old-fashioned, why can't we?"

Carstairs looked at her. Almost he seemed to smile.

"We can't—simply because we're polarized to behave in a different way. There'll always be hailstones coming down between us until—"

"Until, John?"

His answer was like nothing she'd ever known before. The air semed to crackle as he took her into his arms, as though a powerful repulsion field had been smashed by the impact of will when his arms closed about her smaller, trembling form.

"Until you've been married to the stubbornest chap in the System long enough to manage him without getting your ears pinned back."

"How long will that be, John?"

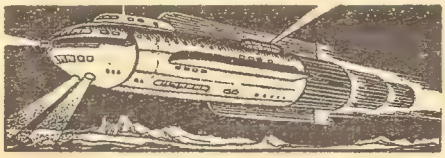
He grinned. "Maybe never. Maybe a couple of seconds after you're Vera Carstairs. Want to take the gamble?"

"But I don't want to manage you exactly, John. Honest I—"

"Want to?"

"Darling, I—"

The roar of a landing rocket drowned out the rest of Vera Dorn's reply.



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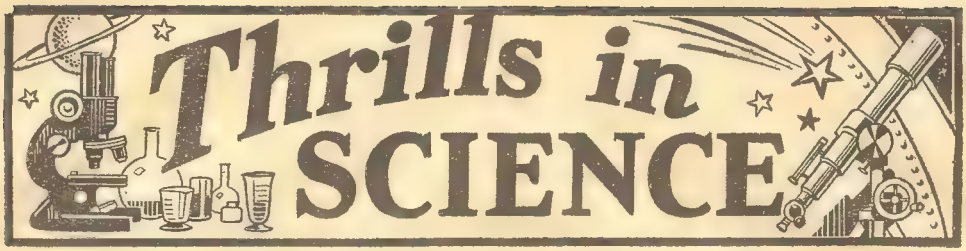


Thumbnail Sketches of Great Men and Achievements

By OSCAR J. FRIEND

THE PLAGUE MASTER

Waldemar Haffkine's Battle Against the Black Death

HE HAD a terrifically long name for such a little boy. Relatives said that nobody outside of the family could pronounce it, much less remember it. The idea—Waldemar Mordecai Wolff Haffkine!

But relatives can frequently be mistaken. The entire world learned to remember and revere this name before Waldemar was forty years old. Lord Lister, the great English scientist, called Waldemar Haffkine "a savior of mankind."

It came about in this wise.

Born in Odessa, Russia, in 1860 to a Russian Jewish family, Waldemar was a big-eyed and thoughtful lad of twelve when he received a birthday present. It wasn't a bicycle or an electric train, or anything like that. It was a book. And of all dull subjects for a young boy, it was "The Journal of the Plague Year," by Daniel Defoe. It might at least have been "Robinson Crusoe," by this same author.

Books were rare things for little boys in Russia in 1872, and Waldemar read every word of it. He became so interested in the horrors and fatalities of plague that he inquired further.

He learned that the dreaded Asiatic cholera and the bubonic plague had been killing thousands of human beings in wave after wave of epidemics which swept, unchecked, through Asia and Europe. The Great Plague of London that Defoe had written about and which had killed 70,000 people was only a drop in the bucket.

Nobody knew the cause of these twin pestilences. No one knew how to prevent men from dying like flies from cholera. Nobody knew how to stop the raging pandemics of bubonic plague which was known as the Black Death.

Twenty-five million people—one-fourth the entire population of Europe—were said to have been killed in three great epidemics of the Fourteenth Century.

By the time he was ready to enter high school Waldemar Haffkine had made up his mind to become a scientist and try to fight these deadly plagues. This decided, he began his studies under the great biologist, Metchnikov, at the University of Odessa. Here young Haffkine learned much to prepare himself for his work of the future, but he learned nothing about his avowed purpose.

Brilliant and studious, he became Metchnikov's star pupil. So proficient was he that before he reached his twenty-eighth birthday the University of Odessa offered him an independent lectureship.

"There is, of course," said the director, "one small condition."

Haffkine looked his interrogation respectfully.

"That is," went on the director, "that you give up your Jewish faith and embrace the Christian religion."

"What?" exclaimed Haffkine, aghast. "What has my religion to do with my scientific work?"

Haffkine and Pasteur

The director shrugged his shoulders. "To me, nothing; but that is the university's condition, Haffkine."

"I am sorry," said Haffkine with dignity. "I cannot do it."

This decision barred him from further advancement at Odessa, and he resigned to go to Geneva to accept an assistant professorship of physiology.

He continued his research work there, perhaps a little bitter at first, but he soon forgot this in the excitement of his work. He was on the verge now of isolating the germ that caused cholera.

And then came a wonderful break for the young scientist.

At Paris the famous bacteriologist, Louis Pasteur, heard of Haffkine's labors, and he cordially invited the young man to work as his assistant in research at the Pasteur Institute in Paris. Haffkine, almost delirious with joy, quickly accepted and moved to France.

Here at the Institute he watched Pasteur perfect his vaccines against anthrax and rabies. With the great Pasteur to guide him, Haffkine plunged deeply into his own life's work.

"Look, sir," he said earnestly to the great French scientist, "if vaccine works against rabies and anthrax, why won't the proper vaccine work against cholera?"

"I see no reason why it won't," replied Pasteur gravely. "If you develop the right sort of vaccine. You have definitely proved that the germ known as the comma baccillus is the cause of cholera. This is a great step forward, but it is not enough. Now what will you do?"

"I will experiment with animals—like you have taught me," declared Haffkine. "I will inject a serum of the weakened germs into them. After varying periods of incubation I will inoculate them with cholera and watch results."

Pasteur smiled and affectionately patted his ardent assistant on the shoulder. "You are on the right track, my boy. I shall await your reports with deep interest."

Haffkine proceeded with his work. After a prolonged series of experiments with his animals, he found that certain batches of them did not contract cholera. He had succeeded in perfecting an animal vaccine.

But would it work on human beings? He did not know, and there were no victims in Paris at the moment for him to experiment on. He did not have the luck Pasteur had had in finding a human victim of a mad dog bite on whom to try his rabies serum.

At last the intrepid young scientist went to Pasteur with his completed reports. The great Frenchman studied them with profound interest. At the conclusion he looked up in surprise.

"You say here, Waldemar, that your vaccine is successful on man as well as beast. How can you make such a statement without first testing it?"

"I did test it, sir," said Haffkine simply. "On myself."

Pasteur looked startled. Then his eyes shone with pride and understanding.

"You are indeed a scientist, my friend, as well as a brave man. Now to prove your work to the

And that opportunity came to pass very shortly in 1893 when a severe epidemic of cholera broke out in India. The desperate British Government, having learned of Haffkine's work, invited him to India to fight the raging plague.

Courageously, nay, happily, Waldemar Haffkine went to Calcutta where thousands of natives were dying in the crowded city. At first the superstitious Indians refused to permit the injection of his strange substance into their bodies.

Haffkine at once got around this by appealing to military authorities. His first patients were the officers and the medical staff of the army. By brave example—and subsequent immunity—the military heads set the pattern.

Hesitant and timid at first, but in gradually increasing numbers, the stricken populace began to flock to Dr. Haffkine at the medical institute to receive the white man's "magic" injection. And as cholera raged through Calcutta, and those who had received the magic injection miraculously did not die, more and more people came to be saved.

In twenty-eight months of frantic labor Haffkine vaccinated 42,000 natives. He became known as the "white magician" and his fame spread throughout India. The deaths from cholera dropped to only a small percent of previous totals. No longer was cholera a scourge to man. Waldemar Mordecai Wolff Haffkine had reached one part of his goal and had made his name a symbol for all mankind to remember.

Worn out from his ceaseless research, Haffkine contracted a tropical fever in 1895 and had to return to England. But he had scarcely recovered when bubonic plague broke out in India, and the terrible fingers of the dread Black Death gripped thousands of natives.

This time Haffkine was sure he knew the proper technique to employ, and he did not waste years in research. Promptly he returned to India and set about making a vaccine for bubonic plague as he had for cholera. And once again this courageous scientist tested the serum on himself before he would risk the innoculation of a single patient.

Again Haffkine scored a great triumph. Once more he proved himself a savior of mankind. While he worked there in India, Haffkine founded a great scientific laboratory at Bombay.

In 1915, feeling that his work in India was done, secure in the knowledge that he had fulfilled his youthful vow, he returned to Paris to live out the remainder of his life in retirement. Until his death in 1930, he devoted his tireless energies to another field—orthodox Judaism—in which he became an exceptional authority.

Waldemar Mordecai Wolff Haffkine was made a Companion of the Order of the Indian Empire by the British Government. Today that institute he founded in Bombay, renamed by the British Government the Haffkine Institute, stands as a monument to this great scientist and scholar—Haffkine, the plague master.

FASTER THAN SOUND

Lieut. Col. Cass S. Hough Improves Flying Technique

CONTRARY to certain belief, the comparatively new Nazi rocket weapon—the V-2, or flying telephone pole—is not the first engine of destruction to attain a speed faster than the speed of sound.

First, what is this speed that mankind still finds a bit amazing? At sea level sound travels at the rate of approximately 760 miles per hour. Prior to the present World War, the only thing man knew that exceeded this speed was a pro-

jectile fired from a gun and the experimental rockets developed by such men as Professor Goddard.

But somewhere in England in 1943 Brigadier General Hunter, European Commander of fighter planes, presented the Distinguished Flying Cross to an American lieutenant colonel for special attainment in independent flight research.

The citation read that the flights took this man "knowingly and deliberately into unexplored scientific fields and under unknown conditions of compressibility and furnished invaluable technical data covering the entire range of dive phenomena."

Lieutenant Colonel Cass S. Hough did not fancy himself as a scientist. He was only a staunch American citizen doing his job as he saw it. Before he joined the Air Forces of the United States he was the vice-president of an air rifle manufacturing company of Plymouth, Michigan. But he proved himself a scientist, and his name will forever shine with glory in the field of aeronautics.

Colonel Hough was already in England as technical director of the Eighth Fighter Command when the first, now-famous Lightning P-38 pursuit planes arrived to take part in the war against the powerful Nazi Luftwaffe. The British tried out this two-engine, twin-fuselage fighter, admired its many fine points, but shook their heads and decided it simply wasn't good enough or fast enough to fight against the Luftwaffe.

Colonel Hough became nettled. He knew a superior fighting machine when he saw it.

"Gentlemen," he said crisply, "you are mistaken. I know aircraft, and I say this ship is a honey."

American slang and British humor can mix well on occasion.

"You mean," suggested a critical R.A.F. man with a straight face, "that this craft is as sweet as treacle—and moves about as fast?"

"I do not, sir!" replied Hough quickly. "Come, let us stage a mock battle, and I will show you."

A mock combat was accordingly arranged, and to Colonel Hough's chagrin, R.A.F. pilots in Spitfires flew circles around him. Had this been actual combat, the Lightning would have been a dead duck for the Spitfire pilots.

This trial would have been conclusive for many another man. Not so with Cass Hough. He was positive that the American plane was a superior fighting ship and he was not afraid to risk ridicule and failure to prove his point.

With a crew of hand-picked mechanics he proceeded to work over his P-38, laboriously figuring and making minor improvements, employing every trick of engineering skill at his command. At last he was ready, and appeared at the British testing depot for another mock battle.

This time it was a different story. The Lightning did the circle-flying. Colonel Hough made flying history that day when his ship gave pointers to the famous Spitfires.

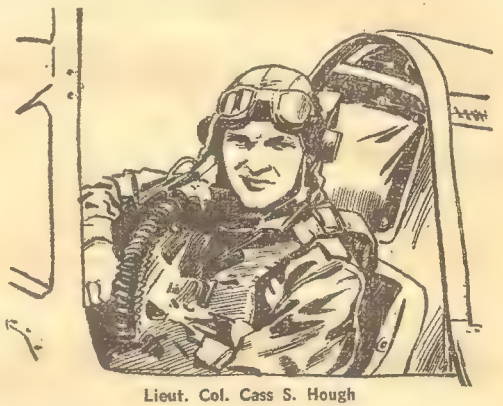
Incredulous, and perhaps a bit nettled on their own account, the R.A.F. flyers took up captured Messerschmitts and Focke-Wulfs against the P-38, and were treated to the spectacle of seeing the American plane outperform them all.

Colonel Hough's faith in the American ship was vindicated. And then tragedy overtook the craft. A skilled pilot took one of the new Lightnings through routine maneuvers. The last thing he did was to put the ship into a vertical dive at 34,000 feet.

When he tried to pull out of this power dive, his wings came off. This brave man lost his life and delivered a crushing blow to Colonel Hough's hopes at the same time.

What had happened? Had the controls frozen at the high speed and the partial vacuum? Had some part of the plane failed at the crucial moment? How to correct the flaw when there was nobody to tell him what had occurred?

It so happened that, within a few hours of this catastrophe, another brave pilot slipped his Lightning into a similar dive seven miles above the earth, He, too, was unable to pull his craft



Lieut. Col. Cass S. Hough

out of the dive in spite of all he could do. This time the wings did not come off, but he was just as helpless as though they had.

In a last desperate gamble for life, he pulled the emergency release that operated the cockpit canopy. The canopy was instantly torn away, and the terrific suction snatched the pilot out of the hurtling plane, breaking both his legs against his safety belt straps.

But this pilot managed to make a parachute landing—and lived to report to Colonel Hough a detailed account of his experience. Armed with this information, Cass Hough repaired to his quarters and pondered the problem. How to make the ship survive the vertical dive, a necessary maneuver of air fighting?

Once more this intrepid man went over the P-38 from nose to tail. He had learned from the second pilot that the craft simply froze in that weird sort of vacuum at high speed, the controls just would not take hold. It was like sliding down a greased shaft with nothing in the way of brakes.

After days of desperate work and thought, Hough had eliminated every possible idea save one. This concerned the trim tabs—the final segments of the tail—the adjustment of which could raise or lower the nose of a plane to keep it in level flight.

Would the hindmost control of this plane respond sufficiently to bring this hurtling thunderbolt out of the vertical dive and permit other controls gradually to take hold again? Could a pilot literally hang by his tail up there in the

blue and recover the mastery of his ship?

Hough did not know. But it *might* work. And it was the last resort. So Cass Hough did some adjusting on the controls of the trim tabs.

"But that seems so futile, so fragile," said one of his helpers.

"Yes, it does," admitted Hough gravely. "That is the reason that I shall test this device myself."

Next morning, over-ruling all objection, Colonel Hough took the P-38 up to 43,000 feet, eight miles high in the thin and frigid air where it was sixty degrees below zero. He cruised around about fifteen minutes while he summoned up nerve to put more than seven tons of airplane powered with two 1200-h.p. engines wide open into a perpendicular dive.

A last look around, and he tilted the ship's nose toward the ground.

For the first 5000 feet, as the speed rose, everything was normal. Then it seemed, said Hough later, that something went "Who-o-o-f-f-f!" and left him hanging there.

The air-speed indicator reached its final marking of 500 miles per hour and then started around on a second lap. The altimeter needle, making one complete revolution every thousand feet, was spinning like a flipped game arrow mounted on a card.

Then the plane began to buffet—lunging downward in a series of violent surges of speed which makes a pilot feel that he is being shaken in a giant cocktail shaker.

Now Colonel Hough began to try the various flying instructions from the book. He tried everything he had been taught and everything he had thought out. He pulled on the controls. No result.

He throttled down his engines—and nearly fell into the fatal outside loop. And all the time he was plunging earthward at the incredible speed of nearly eight hundred miles per hour. He would have passed the entire 1250-foot height of the Empire State Building in less than a second!

The physical pain was torture. He had little more than twenty seconds left by the time he had exhausted every known method of recovery.

"I was beginning to get scared at this point," Colonel Hough commented later in a masterpiece of under-statement. "The only thing left was to try out my trim tab theory."

Releasing all other controls, he began carefully turning the little reel which raised or lowered the trim tabs at the very tail of his plunging rocket. Then there was nothing to do but wait to see if the tabs would take hold. As the ship flashed down below 20,000 feet there had been no checking of his terrific speed.

Then, when he had given up hope, he felt the first faint indication that the ship might come under control. The nose began to lift slightly from the vertical. The ship was literally hanging by its tail in the sky.

But any sudden movement now would shear away the straining wings like magic. The projectile of a plane had yet to be brought safely out of that dive and through onrushing tons of air pressure.

Remembering everything he had learned from that second pilot and everything he had learned from his own flying experience, he forced himself to move deliberately and *ease up* on the trim tabs—his only hold on the sky—as the nose began to sweep up in earnest. He was still diving at better than 700 miles per hour when all the controls came back into play at once.

As he posed for himself the final question, "Will the wings hold?" he blacked out.

When he came to, he was nearly 5000 feet higher, with the plane climbing steadily and strongly toward the vertical. Everything was ship-shape. He had discovered the one thing needed to make this ship a super fighter.

He had found, by the intelligent use of his scientific brain, the exact thing which could bring a plane diving faster than sound safely out of the dive.

By risking his own life to make sure, by his supreme patience and daring, he had undoubtedly supplied the vital information which has since saved hundreds of fighter pilots from destruction and made the American fighter plane a super-weapon for the Allies.

THE CATALYST

How High-Octane Gasoline Was Developed

IN AUGUST, 1943, in Chicago, Dr. Gustav Egloff, president of the American Institute of Chemists, announced to a troubled world that a super aviation fuel was now available in commercial quantities. This wonder fuel, called triptane, formerly produced at a cost of $3000 per gallon, was now being manufactured at slightly less than one dollar per gallon.

Technically, triptane is not a gasoline; it is another hydrocarbon. It is too powerful to be used straight by the existing motors and engines of today, and new and radically different high-compression engines must be designed and built to get the most out of triptane.

Even so, used in dilution, triptane gives our airplanes a forty to fifty octane superiority over the aircraft of our enemies. And the civilian future of this fuel is bright with promise.

Where did this new fuel come from? Was it born full-fledged from the sheer and stark necessity of World War II? Not at all. Let us peel some forty years off the calendar and do a little scientific sleuthing in imperialistic Russia.

It is the year 1903, and hard at work in his laboratory at the Russian equivalent to West Point Military Academy, a young chemistry instructor is trying to make butadiene.

Vladmir Nikolaievich Ipatieff was born in Moscow in 1868, scion of a famous Russian family. He was destined for a military career, and he graduated a captain from Russia's West Point. However, instead of entering the service, he remained at school to teach chemistry to the new cadets.

A vigorous and muscular man of six feet in height, perhaps Captain Ipatieff looked more like the soldier than a professor of chemistry. Fortu-

nate indeed for the world that he chose the profession of science.

So there he was in his lab where his duties gave him plenty of time for research work, and his experiment was reaching the final stages. Even then the world was hungry for synthetic rubber, and man was trying his best to make nature reveal her secrets.

Ipatieff held his product up to the light and examined it. Then he uttered a mild but heartfelt Russian curse as he surveyed the results. A few quick tests, and he sighed in despair as he identified his compound as an aldehyde—a substance between an acid and an alcohol—instead of butadiene.

After recovering from his disappointment, in methodical Russian fashion, the young chemist began to retrace all his steps in order to determine how and why he got this unexpected result.

He finally narrowed it down to the fact that he had used an iron test tube instead of a glass one. The iron had acted as a catalyst, influencing the result without being affected itself.

Catalysis was not new, nor was it new to chemists. But Ipatieff had a sudden inspiration. He would put catalysis to work for man in industial chemistry. His next step was to learn how catalysis functioned under pressure. Before we get away from the subject of synthetic rubber, let it be understood that Vladmir Ipatieff in the years that followed did the major research in butadiene which is the basic ingredient of most synthetic rubber.

But we are on the trail now of high octane gasoline. Ipatieff sought for a pressure tank. The only one available to the chemist of 1903 was a rather crude and dangerous affair invented in 1690 and capable of pressure of only 50 atmospheres.

This was insufficient. Undaunted, Ipatieff proceeded to design and build a tank with a pressure of 500 atmospheres.

With this new tank he undertook a series of exhaustive experiments in hydrogenation—the method by which hydrogen is used to change organic substances. By this process, for example, coal can be converted into gasoline.

Ipatieff turned his attention to the paraffins, by-products of petroleum which up to this time had been considered dead or inert to chemical action. The result of this work in the first decade of the twentieth century by Vladmir Ipatieff led, in time, to high-octane gasoline.

Thus, Professor Ipatieff spent the major part of his life in the study of petroleum. He remained in Russia at the head of Russia's chemical industries until 1930. At this time he was prevailed on by Dr. Egloff to come to Chicago to organize a laboratory for research on catalytic problems in the petroleum industry.

It was about this time that triptane became a laboratory curiosity—a wonderful potential fuel—but produced at the cost of $3600 per gallon.

The coming of war spurred research in all lines, and the aging Ipatieff plunged into the problems of triptane. He spent many sleepless

VLADMIR IPATIEFF

nights, worrying and pacing the floor, trying to put his finger on the elusive point which made triptane so expensive.

And then one night he captured the right thread—a direct outgrowth of his years of catalysis experiments, and the culmination of his life's work in petroleum research. At once he set to work and followed through his experiment.

The job was done. Triptane could be produced in commercial quantities, thanks to Ipatieff. The cost rocketted down to less than one dollar per gallon, and a new super fuel was placed into the hands of the Allies.

A long, long road had been traveled since that day back in 1903 when the professor discovered that catalysis could be put to work for man. Butadiene, octane gas, and finally triptane had come out of an old iron tube in a Russian laboratory.

Ipatieff himself might be called the Great Catalyst. Recently this vigorous old naturalized American was honored at a dinner on his 75th birthday when Dr. Frank C. Whitmore, dean of Penn State's School of Chemistry, said:

"The great triumph of modern internal combustion engines has been the work of thousands of different scientists and engineers. However, if one had to pick out a lone man who was more responsible than any other for our high-octane gasoline—one of our most important weapons in defense and offense—that one man is Ipatieff."

DEVILS FROM DARKONIA, a complete fantastic novel by JERRY SHELTON—VENUS SKY TRAP, a novelet by ROSS ROCKLYNNE—and other headliners in the Spring issue of our companion magazine

THRILLING WONDER STORIES

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THE RED DIMENSION

By ED EARL REPP

The strange tale left behind by Arnoldi Kherkoff reveals a glimpse into the unknown realms beyond man's imagining!

A PARTY of Russian engineers surveying a desolate part of Siberia came one day upon the body of a man. He had evidently been dead for quite some time and, from the wasted face and limbs, it was concluded he had died from starvation. He carried in his pocket among other things a small pouch in which were found some dirty sheafs of paper on which was scrawled what follows. The thing had little interest for the surveyors and it was my good fortune in being an invited member of the party that gave me possession of the papers. Subsequently, I tried to verify the statements made in the manuscript and failed. Though I hunted through countless volumes of the records of Russian courts, I ran across no mention of a Doctor Ivan Korsakoff, or the trial of Arnoldi Kherkoff. Whether this story was only the raving of the poor wretch who was found dead, or whether it had a basis in fact far beyond my ability to discover, I cannot say. I must present the manuscript intact as I translated it, and leave it to my readers to judge.

* * * * *

How I hope to succeed in getting the following narrative to the world is a secret which I never will reveal. Should the channels through which it may reach you be disclosed, then the hands of my jailers would forever seal the lips of those who aided me in giving to the world the true facts of the strange case of my life-long friend and benefactor, Dr. Ivan Korsakoff.

Few people will remember the case. It was given some prominence at the time that the events occurred; but the details were soon forgotten in the frenzied excitement of war and the dethroning of the Romanoffs.

In brief, let me say that I was convicted on circumstantial evidence of having done away with the famous scientist. The evidence I brought in my favor had no effect and I was forthwith sentenced to life imprisonment in a pest-hole in Siberia.

For years I lived in the hope that the truth of Dr. Korsakoff's case might become known. But the passing of years have made me an old man—although I'm only forty—and have caused me to wish that I had received a death penalty. For life has been unbearable! Even now, I lie in a bed of filth praying for a humane hand to relieve me of the burden of life.

Perhaps you will be inclined to doubt me when I say I am still confined in a filthy prison camp. You probably believe that such confinement for criminals has been abandoned by every civilized nation in the world. Let me destroy that belief.

In the wastes of Siberia, forgotten by the world, I am destined to remain for the rest of my natural life! Siberian prison camps were the pets of Russian monarchy in the early days. Mine was the most accursed of all, being visited only on rare occasions to receive prisoners and scant supplies. If civilization has actually abolished these places of lingering death, then mine must have been overlooked and forgotten when the Romanoffs met their fate and the monarchy was overthrown!

But the place still exists. Where, I do not know—nor does any other of my pestilence-stricken fellow prisoners.

IT IS not my intention to dwell too long on the horrible details of confinement here. My main object before I answer the Hand that beckons is to give the world the fact regarding dear Dr. Korsakoff. But first

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EDITOR'S NOTE

SOME stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "The Red Dimension," by Ed Earl Repp, has stood this test, it has been nominated for SCIENTIFICTION'S HALL OF FAME and is reprinted here.

In each issue we will honor one of the most outstanding fantasy classics of all time as selected by our readers.

We hope in this way to bring a new permanence to the science fiction gems of yesterday and to perform a real service to the science fiction devotees of today and tomorrow.

Nominate your own favorites! Send a letter or postcard to The Editor, STARTLING STORIES, 10 East 40th St., New York 16, N. Y. All suggestions are more than welcome!

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The arms writhed like so many snakes as the terrifying creature stood ready to meet its antagonist

let me tell you who I am. My name is Arnoldi Kherkoff, and I, until my arrest, had hoped to become a great scientist. When I was but four years of age, my parents disappeared strangely.

I was left alone—deserted. It was then that Dr. Korsakoff found me wandering aimlessly through the snow-clad streets of Moscow, ravenous, terrified and frost-bitten. He took me at once to his home.

I became his ward and lived with him until the end. He showered me with everything that wealth could offer.

As I grew older, I in turn helped him in his laboratory and learned much about optics and other branches of physics and obtained an inkling of the dimensions beyond ours.

Dr. Korsakoff began to discuss his various experiments with me when I reached eighteen. I was delighted, because it was a sign that I was progressing in the sciences. He could converse with me and receive intelligent replies; and he trusted me not to disclose the nature of his experiments to others.

One day Dr. Korsakoff approached me and laid an affectionate hand upon my shoulder. I looked up from a book I was reading. His face was aglow with excitement and his hand trembled. I surveyed him with alarm, for I felt that excessive work was beginning to affect him. He glanced at the book which now lay closed on my lap.

"I am pleased to see you reading the treatises in that book, Arnoldi," he said beaming. "How far have you gone?"

"I've reached the chapters that explain Dr. Valenev's magic goggles, sir," I replied, regarding him curiously. "The second chapter tells how he managed to see into an alien dimension. Quite interesting reading matter, sir, but rather fantastic. It sound impossible."

His hands became still and apparently

nerveless. Then his strong fingers sank into the flesh covering my shoulder blade. He seemed tense.

"It is somewhat fantastic, Arnoldi," he said slowly, "but not as impossible as one might think."

"What, sir?" I asked, interested. "Those magic spectacles not impossible?"

"Quite so, my son. It is not at all impossible to see into other planes of life through er—er magic glasses."

"I've never heard of anyone ever doing it except in this book, sir," I protested. "And the experiences set down here sound more like fiction than actual fact. Who was this Dr. Valenev, anyhow?"

"Valenev?" Dr. Korsakoff said, brows arching. "Have I neglected to recount his life to you?"

"Rather I have neglected reading his works, sir," I replied.

"Vladimir Valenev, Arnoldi, was one of the very first Russians to take up the practice and study of optometry in the early days. He was actually the father of the profession in Russia. But his startling discoveries branded him as a fool and he was discredited by the church and state. He was eventually strung up by the thumbs in old St. Petersburg for an exhibition of black magic.

"Most of his statements were without concrete foundation, and they led him presently to his death. Yet for all that, Arnoldi, have you ever thought it might be possible to create a pair of spectacles through which one could see into the beyond?"

I stiffened in the chair and the heavy book thumped on the floor. I surveyed his serious features for a sign that he was jesting.

"I've never thought of such a thing, sir," I said, shaking my head. "In fact I do think it is quite impossible with any glass or series of glasses which we have today."

"Naturally, Arnoldi," he said, "it could not be done with our present chromatic glasses. Yet it *is* possible to penetrate the beyond—the planes of existence beyond our own."

"What do you mean, sir?" I asked.

"You already know that we exist in a world that wise scientists realize is very limited. Atomic vibration, my dear Arnoldi, has created a varied series of planes of existence, to which the human retina and the human auditory organs are totally out of accord. That is—everything vibrating within the perceptions of our own immediate powers of sense manifests itself in the form of concrete material matter, such as myself and yourself and objects in this room, perceptible by sound, sight, smell, touch, and so forth. Everything below or extremely above our accustomed vibratory limits is to us non existent. You are aware that there are sounds so high in pitch or frequency that the human auditory system cannot hear them. Also there are objects that emit light vibrations whose low frequency makes them invisible to the eye."

"You have taught me to understand that, sir," I replied, beginning to have a dim, awed feeling of what was to come.

Surely he had not evolved a pair of glasses adjusting our senses to vibration frequencies beyond our natural limit, for he would have told me of it. But I had learned to know two sides of Dr. Korsakoff. Although he took great pride in explaining his experiments to me, he secretly guarded his plans and formulae until he could offer concrete proof of their feasibility.

"I have tried to teach you much, Arnoldi," he said, "but a complete knowledge of the science of infinite dimensions is too broad for one man. Our span of life is too short—the powers of apprehension too limited. Yet I mean just what I say about the planes of existence below and above our senses of vision and hearing. I will go even further. I believe there are living material things on these other planes. It will surprise you, no doubt, to learn that I have created a medium through which we may see and hear them!"

I STARED at him astounded—fascinated. He smiled down at me with supreme assurance, but without the arrogance that usually accompanies such statements of scientific power. Yet the conception of such a thing was too stupendous for me to grasp all at once.

At the moment I could relieve my tension in no way but to laugh. My mirth seemed to sober him and his features clouded. I felt suddenly ill at ease under his steady eyes and became more serious.

"I'm sorry, sir," I said, grasping his sleeve. "I couldn't help but laugh at the conception. But I simply can't grasp the feasibility of such a thing. It sounds too much like Valenev."

"Arnoldi," he replied impressively, "as we see it the world has been fairly well explored. Yet, if we were to delve into the hidden worlds around us, think of the strange objects and being that might be seen. Why, the value of the knowledge that could be gleaned from such an adventure would be beyond calculation!"

My head spun at the thought and I stood erect, eager with anticipation.

"You almost convince me, sir," I said, "that such a thing can be done—that such worlds do actually exist."

"It *can* be done, Arnoldi," he replied, smiling again: "And other worlds *do* exist within our own world! It is possible that we can visit at least several of them. Would you like to see them, my son?"

Trembling I nodded assent. Dr. Korsakoff grasped my shaking hand and wrung it in a firm grip. He placed an arm around me and together we strode slowly toward the laboratory.

As we entered the work-shop which contained practically every known instrument of optical science, and many others, including high-speed lathes, grinding apparatus, measuring devices for facet shaping, and priceless stores of transparent gem-stones, I had a vague feeling that the experiment would see the advent of something unknown to man. I cast a glance at the scientist. His face was stern and serious, although his eyes glowed with excitement. But, could I have realized then what the experiment was to lead to!

He motioned me to be seated before a long, quartz-topped table. It shone like myriads of diamonds under the glare of a hanging lamp emitting a strange purplish light. In the center of the table lay two oddly-shaped helmets. From what I believed to be the front of them, there struck out two sets of tapering metallic cylinders. On the sides were accoutrements which I learned were to fit tightly over the ears. Wires ran from the helmets toward the edge of the table and disappeared beneath it. I surveyed them curiously as Dr. Korsakoff sat down beside me. He picked them up and held one close to me for observation.

Inside the cylinders I saw what appeared to be crystals with hundreds of facets which glittered weirdly under the light. The helmets were oddly designed and of light, pliable metal. The backs of them were not unlike the ancient Roman helmets in so far as they extended down to the shoulders where the metal would fit snugly.

The auditory appliance was shaped exactly like the human ear. In the center were small, bright-metal discs which fitted directly into the inner lobe for unhampered transmutation of whatever sounds might come through the magnetic discs from the invisible worlds!

"You see, Arnoldi," the doctor said in explanation, "there are several crystals in each of the sense-transmitting cylinders. Each one was ground with seventy-seven outer facets and double internally. I have cut three different stones and pieced them together in slices to give them the power to transmit the super-sense vibrations. Between each of the lenses, yet below the direct line of vision, are very tiny, high-frequency electrical bulbs. By special transformer I shall lift the voltage through the crystals from a hundred and ten volts to twenty-two thousand. The current will pass finally through the helmets and into the cylinders, creating a transformation of vibrations to our own perceptive limits. The senses of this world are directed to us by a ray, commonly known as the infra-red ray. In a small transparent container behind each of the crystals is an accumulation of *dionium*, a creation of my own. Beyond that, my dear Arnoldi, I can tell you no more about these instruments; for I have constructed them in such a way that caused me to depart from many accepted principles of optics."

He lifted a helmet and fitted it over my head, the cylinders directly in front of my eyes and the auditory systems snug in my ears. I sat deathly still and closed my eyes while he made certain adjustments, expecting momentarily to find myself looking into a strange world of the beyond. But nothing met my vision. Only darkness—deep blackness.

"Do not be alarmed, Arnoldi." He patted me assuringly. "There is nothing to fear. Just sit still until I adjust my own helmet to the Sixth Dimension, and we will be ready for the experiment."

PRESENTLY I heard the hum of a high-speed motor somewhere under the table. It throbbed softly through the auditory apparatus on the helmets. I shuddered at the terrific vibratory movements of the world I began to perceive. Suspended between two worlds, these new sounds grated like steel on my ears. I remembered that such vibrations were alien to the human organs and settled back to wait.

I was startled by a sudden word from Dr. Korsakoff, for it pulled me back to our own world.

"I didn't mean to frighten you, Arnoldi," he said, chuckling. "There's really nothing to be alarmed about. I merely wanted to tell you not to jump when I start the current flowing through the helmet. It will sound very weird on your ear-drums. Sit perfectly still and keep your eyes closed for best results. Open them very slowly, and a new world will be revealed. Now be perfectly still, my son. I am switching on the current. You keep your hands on the table. I will control the vibration from a panel at my side. Have an enjoyable visit into the Sixth Dimension—the Red World, Arnoldi!"

I sat with closed eyes for a long time and felt drifting off. Then slowly I opened my eyes and was stunned by an amazing brilliancy of vari-hued lights. For a moment a pain shot through my eyes—they pained to the depths. Gradually it wore off. Crystals that ranged in color from deep, unfathomable red to emerald green danced before me. As though fighting for some control of a color-world the reds began to seep through into the blues and the greens.

They suddenly merged into one solid color—the deep, unfathomable infra-red of the spectrum. The suddenness of the change

caused my whole system to react in a terrific shudder. Remembering the scientist's words, I clenched my teeth for control over myself. Now I leaned forward tensely. Objects were slowly shaping themselves from the masses. It was the Red World! I thought I was gazing on a world of fire. Everything shimmered in what appeared to be a terrific heat. Then, as objects assumed definite form, I was able to detect the outlines of strange, luxurious vegetable growths. Weird trees and ferns stood on all sides.

The sky overhead was of a red not less deep than the more concrete materials of Red Dimension. The earth—as it appeared, showed in open areas like blood-colored sandstone. Across it raced what appeared to be heat waves dancing on a hot, searing surface. Slowly the scene moved.

Then I beheld a rather large clearing completely surrounded by the thick, tangled vegetation. I thought I caught a slight movement in a patch of swaying lush herbage. I watched the spot tensely.

Slowly, very slowly, the blades parted and out of them protruded a weird snout. The thing was coming into view, slinking forward like a stalking panther.

Its nose, like the magnified beak of some grotesque earthly insect, pointed to needle thinness, and was pikelike at the base where it protruded from a terror-invoking face! The eyes were like the orbs of an owl, opening and closing with even, rhythmic precision. The creature seemed to crouch ready to spring upon a victim. I wondered at whom or what that death-dealing pike of a snout was aimed. And what did the victim look like? And what were the dimensions of the strange beast or insect of prey? I was soon to learn!

Suddenly the crouching thing hurled itself forward at terrific speed. As it raced on long, slender legs toward the center of the clearing, it appeared in full view to be really an insect. It had three pairs of well-balanced legs that held the segmented body well above the herbage when erect.

Two pairs of wings were distinctly discernible; although they were as transparent as the wings of a dragon fly. They struck outward, apparently to lend speed to the racing thing as it fairly flew across the open. Accompanying its motion there was a dull whir that sounded weirdly in the heavy silence of the red jungle.

I felt as though I were in the jungle, and the thing was coming toward me. I tried to move, even to scream but it were as if I had turned to stone. A frenzy of fright filled me.

But then I perceived another creature even more loathsome than the insect. I tried to close my eyes from it, but a horrible fascination of fright forced me to look at it. It stood, half-crouched, as though waiting for the arrival of a deadly enemy to give mortal combat. Its eyes, protruding from an egg-shaped brow, were concentrated on the coming insect.

As though suddenly sensing that it was being watched by an unseen enemy, it turned its head in my direction for a glance at its invisible audience. The thing's eyes bored into mine for an instant and I suddenly felt very weak and limp.

Probably eight feet tall it stood. From its vile mouth blood-hued saliva dribbled. Loathing filled me. It had four skinny legs that seemed like stilts, jointed well up toward its narrow, straight hips. The abdomen bulged like the belly of some huge boiling pot, and heaved tremulously with each enormous intake or outlet of breath that must have been as foul as the creature itself.

At the end of each leg was a wide, web-shaped foot that covered an enormous area even for so large a monster. Broad-shouldered, with three tentaclelike arms attached to each side, the terrifying creature of the Sixth Dimension stood ready to meet its antagonist.

The arms writhed like so many snakes held together by the heads, their bodies swinging free. The arms on the right clutched at a long spearlike object that appeared to be shaped like a small fan at one end.

SIGHT of the object, which I accepted at once as being a kind of a weapon, gave me the feeling that this horrible beast was of greater intelligence than the other. Seeing the weapon brought into play strengthened my belief that here was really a creature far above the merely animal, despite its indescribable loathsomeness!

That it was deadly, more deadly than any weapon we on this plane ever possessed, I was soon to learn!

In comparison with the intended victim who now stood with weapon upraised, fan-shaped end pointing toward it, the monstrous insect seemed slightly more than half his size.

Yet the insect came on without hesitation, its needle-tipped, natural weapon, aimed at the towering creature. Should the insect actually succeed in reaching the more intelligent creature of the Red World, its pike would doubtlessly run him through from pot-bellied abdomen to the small of the back.

With a sudden roar that echoed and re-echoed in my ears, the larger creature crouched down. Then I heard a whining hiss and from the fanlike end of his spear-shaped weapon shot a sudden beam of strangely mixed reds and yellows.

The ray seemed to begin in a point and widen abruptly as it left the weapon, tak-

ing in an area that I had no way of calculating.

At any rate, the racing insect seemed to stop in its tracks and wilt to earth where it lay, trembling violently. Finally it became still.

Then, all at once, the air was filled with a terrible hooting and screeching that chilled my blood. The victor of the uneven battle siffened at the first outbreak of the violent sounds and swung his protruding eyes around the clearing.

His legs went rigid as though prepared to run, when he beheld a slowly-advancing army of the monstrous insects ringed around the edge of the clearing and treading the low lush herbage with slow deliberate steps as they crept upon him.

As they came on, marching with ominous steadiness, I wondered if any of the upright creature's fellows were near. Surely he had not wandered into this remote section of his world alone.

Immovable as I was I could not look about, and I dared not move for fear that they could see me. But the creature himself seemed prepared for the onslaught. He assumed his crouching position again and pivoted around in a circle. Suddenly the insects rushed. The whir of their movement and the new intermittent hooting, created a battle din in my ears.

Instantly the peculiar rays shot from his weapon and the ground on one side of him was covered with the stricken insects, twitching spasmodically as they died. He spun around in a quarter circle and cut a clean slice from the ranks of the threatening insects.

As he spun around again, I speculated upon the strange scene. What was this? Was it the re-enactment of a scene such as had gone past in the dim days of our own world?

Were these enormous insects the undeveloped life from which had sprung the intelligence of the Sixth Dimension—the Red World? In all probability it must have been! For after all there was a strange similarity between the two forces. The legs and the bodies!

This then, must have been a dreadful battle between the developed and the undeveloped—like the eternal combat of man against beast—beast against man, for supremacy.

Would intelligence on this weird plane of life, as on our own, ultimately predominate?

With panic striking at my reason I watched the battle. The Red World's "man" swung around again with whip-like motion. His rays cleared a clean path through the threating ranks again. Only one quarter of the circle remained now and the upright creature opened his vile mouth to voice his cry of victory.

It came in a weird maniacal scream that vibrated and re-echoed over the Red Domain like the cry of a preying jungle beast! The insect horde hooted dismal sounds of defeat, but what remained of them came on nevertheless.

Then again came the defiant answering cry of the upright creature.

He tested the atmosphere with wide, flexible nostrils. Again he voiced his cry of victory. It was answered by a series of exultant roars coming from somewhere deep in the jungles.

Then the creature made his fatal mistake. Expanded to conceit by the victory within his grasp, he lowered his ray weapon and surveyed the remaining insects with contempt. Whether the presence of his fellows, probably not far in the growth, had bred within him a feeling of security, I do not know. But hardly had he lowered his instrument of destruction than the horde of insects closed in on him with astonishing rapidity.

Bewildered at the suddenness and calmness of the rush, the creature roared in a different note, appealing and terror-stricken, and struggled vainly to bring his weapon into play.

It was useless at such close quarters and he cast it aside to grasp six hooting insects in the steel-like grasp of his writhing arms. He crushed them on the instant and hurled them aside. I heard him gasp, when the needle-pointed pikes of the insects began to puncture him.

I caught sight of ghastly mysterious organs protruding from his bulging belly as an insect shook itself loose. He crashed to the ground. Instantly the insects changed the sound of their voices and the ring of high-pitched hootings drowned his cries of death.

AT ONCE they set upon the fallen creature. They gouged and tore into his vitals. He managed to keep up a dismal howl even after his vitals had been ripped from his belly. I saw a dozen insects line themselves along his side.

They plunged the pikelike snouts into him and sucked at the thick red substance that was his blood. One lowly creature took hold of the thick skin near the victim's breast. With a jerk it ripped a long streamer of flesh from the body and gobbled it with smacking relish!

That scene was altogether too much for me to stand. I strained and strained to tear myself away from the stonelike immovability that gripped me. Finally I managed to emit a terrible scream and seemed to faint away.

When I opened my eyes once again, I was still in the Red World. Out of the jungle raced a wedge formation of upright creatures, like the slain, with ray instruments, pointed at the devouring insects. With incredible speed they came into the clearing. Instantly the space was aglow with the red and yellow beams.

The insects clambering over the torn and mangled body of the fallen creature lined themselves to meet this new enemy. With an abrupt rush, as though by some signal they advanced toward the oncoming wedge. But before they could cover any amount of space the fatal rays wilted them in their tracks.

Harsh roars echoed through the growths. The features of the upright creatures were even more hideous with rage and they set upon the dying insects to gorge! One insect just to my right seemed to have been untouched. It rose suddenly and attempted to escape. An upright creature detached himself from the gorging mass and gave chase, bringing into play as he ran, his death-dealing ray instrument.

On they came, directly toward me. As they neared I could almost feel the terrific heat of the creatures' bodies. Ghastly features stood in front of my eyes. It seemed to me that hardly a foot of space separated us! I screamed insanely again. Then I saw the upright being lift his ray-gun. The reddish yellow ray seemed to bite into the depths of my eyes. I heard as from far away a deep-throated groan.

I seemed to be flying through space and suddenly, with a jerk, I found myself seated in the chair of the laboratory. I tore frenziedly at the helmet on my head and managed to take it off. Then a dizziness overcame me and a black void . . . .

At any rate, I lay stunned and senseless for what seemed hours. When I finally regained consciousness I opened my eyes to see Dr. Korsakoff sitting stiff in his chair, his helmet still intact. I reached out and grasped his shoulder and shook him. He was cold, his body rigid.

Terrified, I leaped from my chair and swung him around. Oh, God, that I may never witness such a sight again!

The front portion of his helmet seemed to have been cloven with an axe! The vision cylinders hung in shreds and clotted with dried, cracking blood! The lower half of his face seemed to have been beaten into a mass with a blunt instrument!

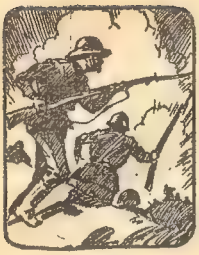
I screamed like one insane as I removed his helmet. Across his eyes and frontal arch, his skull was cloven in twain! The rays of the Red World had cut a deep gash through which had drifted the life of my dear friend and benefactor!

How I managed to escape a similar fate I do not know unless from my mad movements to remove the helmet.

What must have happened was that our devices, not insulated against things of which Dr. Korsakoff could have known little or nothing, had acted like copper wires in the distribution of electrical energy. The Sixth Dimension beam, then, must have been carried along with our own to strike at us in our own distant plane.

Why tell of what followed—my apprehension for the crime and my conviction?

(Concluded on page 96)



This STARTLING WAR

News and Notes from the Science Front

GARAND IMPROVES M-1 RIFLE—John C. Garand, famed inventor of the M-1 semi-automatic rifle now standard in the U. S. Army, has taken out a patent on an improvement in the gun's cartridge feed. The device is known as a follower—a plate that pushes the staggered column of cartridges upward in the magazine as the rifle is fired. It has a vertical rib that keeps the lower cartridges properly aligned with respect to each other. Rights are assigned, as with all Mr. Garand's previous inventions, royalty-free to the government.

●

***QUICKER AND CHEAPER BOMB PRODUCTION**—Faster and faster falls the rain of bombs on cities of Germany and Japan—faster and faster must American factories turn them out. A method for producing bomb casings quickly and cheaply out of interchangeable stamped-metal halves has been invented by John C. Whitesell, Jr., of Norristown, Pennsylvania. An out-turned flange at the edge of each longitudinal half of the casing makes riveting together easy. Tail fins are as easily riveted on.*

●

NEW SUPERCHARGES COME IN PAIRS—Two new airplane superchargers have been awarded recent patents by the government. One is a simple device, for use on liquid-cooled V-type engines. An exhaust-driven turbine pushes the air through a duct, athwart which is a grille through which the coolant is circulated. This was designed by C. E. Sorensen of Detroit for the Ford Motor Company.

The second supercharger, invention of D. R. Shoults of Schenectady, is assigned to General Electric. In it the exhaust gases are discharged from the turbine buckets directly to the atmosphere, where they are cooled by air from the slipstream.

●

***RUBBER FROM GOLDENROD**—A new way of getting rubber from common goldenrod has recently been patented by J. W. Haefele of Ridgewood, New Jersey, and Dr. John McCavack of Leonia, New Jersey. Heretofore, goldenrod rubber extraction, which was pioneered by Thomas A. Edison, has been hindered by resins in the leaves which caused the fluids to foam excessively during the flotation process used in extracting the rubber.*

The two inventors eliminate this difficulty by adding an alkali salt mixture to the flotation medium. This dissolves the resins but not the rubber particles, which float up nicely and are easily removed.

●

GAS-MASK SPECTACLES—Marine Corps Major S. F. Alexander has come up with a novel and necessary wartime invention—specially designed eye-glasses for use when wearing a gas-mask. The frame is streamlined to the nth degree, offering no projecting points or angles to interfere with the use of the mask or to catch in it while it is being donned or doffed.

●

***"PINWHEEL" COMBUSTION ENGINE**—A novel type of internal combustion engine, in which pistonless cylinders are wrapped spirally around a shaft, has been put forward by S. J. Pover of Denver.*

Within the static circular casing, fuel mixture is admitted to the mouth of each cylinder as it passes the intake port. It is compressed as it passes a peculiarly shaped lobe, then fired as it progresses into the next part of its cycle. Continuous rotary movement without any reciprocating parts is claimed by the inventor.

●

HINGED LEADING EDGE FOR PLANES—Changing an airplane wing's lift by means of flaps, slots, special ailerons and other devices at or near the trailing edge is familiar practise. Something less usual is offered by a German inventor, Ludwig Bölkow of Augsburg, who puts the thick leading edge of his wing on a hinge or pivot, so that it can be raised or depressed at will, thus changing radically the camber of concavity of the wing and, with it, of course, the lifting characteristics. Rights are vested in the Alien Property Custodian.

●

***TWO NEW "BLOWBACK" SUBMACHINE-GUNS**—Two new "blowback" submachine-guns have recently been patented—a blowback being a weapon in which recoil energy is utilized to operate the extracting and loading mechanism. One, devised by Marriner A. Browning of Ogden, Utah, employs a two-part breech block that separates slightly in action, thereby reducing the amount of jar inherent in a solid block.*

The other, invented by Walter T. Gorton, a Springfield arsenal employe, has a down-sliding recoil-absorbing mass which moves in a channel hollowed out of the stock.

Warder put an arm about his wife and drew her close

FATAL THOUGHTS

By LESLIE NORTHERN

James Warder uses a new and terrible weapon on Rigel's distant planet when a stubborn beast proves menacing!

THE enormous black beast sat at the mouth of its burrow watching James Warder draw near. It sat with nine yards of cubic rock and tumbled red sand betwen its segmented legs and the reeling Earthman, its long tapering snout buried in the loose folds of its body pouch.

The heat was intolerable and it beat down upon Warder in orange-colored waves, blistering his flesh beneath his skin-tight over-suit, almost making his eyeballs crawl.

Warder didn't know what the monstrous creature was thinking. He only knew that it feared and mistrusted him, and that he'd have to overcome that mistrust if he wanted to stay alive.

Hunger he could have endured, for his meager supply of concentrates was sufficiently rich in the essential vitamins to keep the flame of life burning at a just-above-

deficiency level. He'd lost weight, he was gaunt and emaciated, but since he prided himself on being something of a stoic there was no reason why he could not have endured the pangs of hunger till the stars fell out of the sky.

Thirst was another matter.

On Earth there was tormenting mirages to add to the sufferings of thirsty men marooned in a wilderness of sand. On the Rigel sun planets there were no mirages and yet—the torment seemed a thousand times worse because of that very fact.

A shining lake in the sky could cause torment, yes. But it could also stir hopes and evoke memories. But water deep underground, water never emerging anywhere on the planet, never bursting forth in a shining torrent and striking down to the sea between high, white cliffs gleaming in the sunlight—that idea was ghastly!

It seemed to Warder that his jumping nerves were imposing a heavier penalty than he could bear. He was almost sure that the strange beast was wondering whether the impulse which had brought him from the shelter of the wreck into the open desert would carry him within reach of its claws.

The fact that it could read his thoughts did not mean, of course, that it could gage the strength of his impulses, or anticipate his every act. But unfortunately during the first day and night, when he'd yielded up his thoughts in delirious babblings, the monstrous creature had discovered just how desperate his plight was.

It knew that he had come to the planet on an exploring mission in a chartered roto-cruiser which was resting now on a sloping bank of red sand about three miles from its burrow.

It knew that the ship was a charred and twisted mass of wreckage and that only a single small compartment—the airlock chamber—had survived the crash and was capable of sheltering Warder from the blinding glare of the sun.

WARDER'S lips twisted in a savage grimace. That much the beast certainly knew. It had never been inside the ship, however, or explored the half-telescoped corridors. Did it know that a little sickbay had also survived, dismal with spilled antiseptics and blood-caked bandages?

Well, it knew enough—it knew more than it had any right to know. It knew that, sitting in the airlock chamber with her head cradled in her arms, a torturing dryness in her throat, was a girl, Warder's "mate."

There were times when the creature's thoughts impinged so strongly that the Earthman seemed to be regarding himself through the eyes of the creature. But now there was a barrier, for the great beast was warning him not to come any closer without revealing his thoughts.

For a moment Warder was tempted to heed the warning. Fortunately there had been episodes in his experience which had taught him not to under-estimate the deadliness of mental weapons. Before interstellar flight had brought humanity into close and dangerous contact with alien races, few men had realized that telepathy could be as deadly as massive doses of cobra venom instilled into a vein.

Failure to realize this had been a strange blindness, an incredible blindness, for it should have been obvious to a child that thoughts could not be projected into the mind without influencing the mind, and that a mind which could be influenced could be—controlled.

The strange beast here was hideously different from all the life forms with which Warder was familiar. Superficially it bore a certain resemblance to a terrestrial mammal of the tapir family, but there was nothing on Earth or any of the solar planets which could rear itself to such a height, or move with such a bending, twisting, crinkling of its entire bulk.

There was something about the creature that tore at the foundations of Warder's sanity, and affected his senses like a drug. Upon a body so immense as to seem almost columnar was set a head that was all bulging cranium and tapering snout. The snout was thirty feet in length, and when the great beast was in motion the snout went questing.

It slithered down into the soil ahead of the gigantic body, and tossed loose dirt to right and left. Or writhing up into the air, moved erratically about. The snout was in constant motion, for the Rigel beast absorbed nourishment continuously from soil and air by sucking in small microscopic particles with its every breath.

The action was instinctive, and it did not interfere with the strange creature's mental processes or its ability to concentrate. It did not interfere, and it could not be stopped. Even when the beast buried its snout in the loose folds of its stomach pouch, the incredible organ remained an extensible dry vacuum into which mineral salts and organic matter could be drawn at any angle from mediums light or dense.

Now as it watched the man's angular shadow lengthen over the reddish soil at the mouth of its burrow, it fastened its eyes on a point just a little ahead of the shadow, and moved slowly backward, its snout in furious motion.

It was directly over the burrow when Warder spoke to it for the first time.

"You have warned me not to come any

closer!" he called out. "But I am coming closer! I must!"

Warder halted as he spoke, knowing that the beast would reply if he did not accompany the words with a hostile gesture. Now he stood very still waiting for a message to reach him.

"I do not want to hurt you," he added, almost pleadingly. "But I must have water!"

The strange creature raised its eyes and looked directly at him.

Its reply was implacable.

"Without water you will die. You must die."

Warder moistened his dry lips. "Why do you hate me?" he asked hoarsely.

"I do not hate you," the beast telepathized. "But there is nothing but hate in your mind. If you could you would kill me."

The creature paused, as though to give emphasis to its thoughts. "You would if you could. But you can't."

Suddenly the beast's twelve segmented legs were no longer straddling the burrow.

Warder did not see it vanish. He only knew that it had vanished—so swiftly that the mouth of the burrow seemed still to be filled with a faint, luminous swirling, as though the strange creature had plunged from view with twice the rapidity of light.

In sick despair Warder stumbled forward, and fell to his knees on the edge of a yawning blackness. It might have been better if he hadn't, for the instant he stared down a whiff of something came out that drove him backwards with his hands pressed to his face.

CROUCHING in darkness fifty feet underground the beast relaxed its will, lowered it snout and resumed its feasting. In the sixtieth cycle of its youngness it had discovered that even instinctive movements could be controled, the suction within a vacuum reversed.

The dread loathsomeness of the something in the man's mind which it could hardly endure was impinging even more virulently now. There was a red, killing rage in the man's mind, and the great creature shivered, and retreated still further into the darkness.

When Warder dragged himself back to the burrow his lips were twitching, and his thirst was such that the tortures of the rack would have seemed trivial to him, and to relieve his thirst he would have quite willingly stretched himself on a bed of coals.

He lowered one foot into the burrow, pulled his hand-blaster from his belt.

"There is water down there!" he said loudly in a voice he hardly recognized as his own.

"Yes, there is water," the beast telepathized.

"I will climb down and drink then. The burrow is wide enough."

"My home is too narrow for such a guest as you," came back. "There is nothing but hate in your mind."

Warder's lips opened, but no sound came out. He swallowed and had another try.

"No, it is not really hate. You infuriate me, but I do not hate you."

"You have no love for me!" came instantly.

"You could hardly expect me to love you." Warder's voice cracked despite his effort to control it. "You are barring my way. For no reason at all you are barring my way, and there are some things a man cannot endure. You cannot build a trap for a man. You cannot bar the way either, which is the same as building a trap. I warn you I will kill you if you do not move aside."

Almost it seemed as though the strange beast pounced on the threat, so quickly did it reply.

"If you come into my home and use that weapon in my home you will set a trap for yourself. A trap can kill, can't it? A trap can sever a limb, draw—blood? I would not need to build a trap or set a trap. My home is so narrow I could make a wave in your brain which would kill you. Would not that be a trap? An animal trap—rat trap? Would you not catch yourself instead of the rat?"

It was hideously like a nightmare and yet Warder knew he was staring down into the blackness with his eyes wide open, and a flood of brightness in front of his pupils and behind them, as though a thousand candle power light had come into being in the depths of his mind.

"I am coming down!" he called out.

Almost at once there was a barrier of some sort that hadn't been there an instant before. It grew stronger the instant he lowered himself into the burrow and started downward.

He was twenty feet below the mouth of the burrow when the beast struck at him with its mind.

For an instant he felt—nothing at all.

Then he began to feel it. It was like a something tipped by a long thin nail or claw moving around deep inside his head, and stopping at ten second intervals like the hands of a clock.

When the claw stopped, there was pain. It wasn't a sharp pain, not a stabbing pain such as a claw would make if there had been anything physical inside his head. But the claw feeling was there. It was peculiarly horrible because the feeling was of a great delicacy of structure threatened by something that could tear.

It was as though every time the something stopped the claw began dissecting out a moist, quivering filament from the most sensitive part of Warder's brain.

When he felt he could endure it no longer he turned about, and crawled back up the sloping floor of the burrow on his hands and knees, his breath coming in choking gasps.

A half hour later Warder was lying stretched out on the sand, his hands cupped around a pair of penetrative-ray binoculars. The binoculars were half-buried in the sand, and he was staring down through them with the tormented absorption. He was suffering as if someone were applying a lighted torch to his toes.

It wasn't the first time Warder had tortured himself in a vain, half-insane attempt to draw a little solace from an instrument of science that could dissolve a visual barrier forty feet thick. Beneath the thin subsoil there stretched a barrier of solid rock, but so intense were the cathodic radiations excited by the compact little instrument in Warder's clasp that even substances opaque to ordinary Rontgen rays could be pierced by the X-ray action of its powerful focusing tubes.

The rays passed completely through the rock strata beneath the sand, so that Warder could see straight down into the cavernous world beneath.

EVERY pebble on the sloping bank of the stream stood out with a startling clarity. But though the very shadows on the water seemed to be beckoning to Warder and inviting him to drink just staring down increased his despair a thousandfold.

The stream was not a mirage, but a limpid, smooth-flowing ribbon of water meadering in and out between towering fungus growths a hundred feet beneath his tortured gaze. It was not a mirage, but how could there be any solace in staring when the rock-piercing rays which poured from the binoculars could not bring a single drop of that water an inch nearer to his lips?

There was nothing in Warder's experience which could have inured his mind to the emotional impact of a subterranean world of lush vegetation and crystal clear streams beneath a hot blistering wilderness of sand where just one monstrous creature held sway.

There was only one creature, and one burrow leading down to water cool and bubbling, and suddenly as Warder lay groaning he saw his enemy plain again. The gigantic beast was advancing between the focus growths directly beneath him, was moving on its twelve segmented legs directely toward the stream.

With an inward shrieking he watched it, knowing that in a moment its long tapering snout would descend to the ground and go slithering down into the water.

Oh, he was torturing himself needlessly! Even if the beast drank noisly, greedily, even if bubbles collected in a sparkling circle about its snout, no sound could arise to torment him. He couldn't hear it drinking. He couldn't hear it, and a beast slacking its thirst was not as tormenting a sight as a man plunging his whole head into the water, sobbing as the dryness left his throat!

Warder was suddenly aware that the monstrous creature had halted, and was staring up at him through the murk, as though resenting the fact that he was staring down at it through a barrier it was powerless to pierce.

"When I find a spoiled fruit in my burrow I bury it," the beast telepathized. "When you die I shall bury you. Burial customs. You bury your dead, don't you?"

"Curse you!" Warder groaned.

"There is a wrongness about you," the creature telepathized. "Your lives are too brief and you have too many younglings. We mate but once and live until we are ripe with wisdom, thousands of years as you measure time."

The creature paused, as though aware that it had the power to crush Warder mentally as well as physically.

"We do not live in colonies as you do, but ripen slowly in solitude. A hundred miles, as you measure distance, separates my home from the home of my mate. Beyond the red distances there are other homes, but they would be too narrow for such a guest as you. There is nothing but hate in your mind."

Up to that instant Warder had felt like a man holding a stop watch, and timing his chances for survival, hoping against hope despite his torment. But now, suddenly, there was nothing left for him to hope for. He could not have dragged himself across ten miles of desert, let alone a hundred. He could not drag himself to another burrow leading downward because the red distances were choked with swirling dust, and a hundred miles of emptiness and glare would have taxed the endurance of a giant in seven league boots.

In the vicinity of the ship there were no fissures in the rock strata, no openings into the subterranean world except the tunnel that was ocupied by the beast. Even had he possessed the strength, the tools, the engineering skill to hew another tunnel through sand and rock the beast would have stopped him with its mind. Before he could have raised a magneto-drill to his shoulders, before he could have cleared away the sand, he would be stopped.

Perhaps desperation gave him the courage to act on a sudden impulse that was charged with danger for himself as well as for the beast. Or it may not have been a deliberately-willed act at all, since he hardly

thought about it, or dared to think about it.

The beast could read his thoughts, but it could not prevent a sudden, almost instinctive contraction of his fingers on the binoculars in his clasp. Neither could it leap back in time to avoid the searing, blinding burst of flame which erupted in its path.

For one awful instant the great creature clawed at its face and its enormous body took on the appearance of a blazing comet. Then the light dimmed, and Warder was clasping a burnt-out instrument of science that could not have pierced the skin of a gnat.

A minute passed, two minutes—three.

Out of much confusion a thought came. "I have killed it!"

THE dreadful certainty that he was going to die went out of Warder, and for an instant a wild joy took possession of his mind. Despite his torment, despite the dryness in his throat, a wild joy that he had possessed the courage to risk permanent blindness by intensifying the beam.

Then—his shoulders jerked, and an agonized cry tore from his lips.

The tearing claw feeling was back inside his head, but now there was a toothed beak feeling acompanying it. Deep inside Warder's skull a scaly, reptilian thing with a bird-like head tore and plucked at his brain, and wiped its wet claws on its breast.

Screaming, digging with his fists into the sand in a futile attempt to alleviate his torment, Warder dragged himself along the sand.

After a moment the clawing stopped.

"You must die," came mercilessly. "There is nothing but hate in your mind."

He staggered back to the ship.

A look of horror came into Jane Warder's face when she saw her husband in the airlock.

He was standing perfectly motionless and behind him through the circular port loomed a tumbled wilderness of sand. His hands were clenched, and against the patches of light and shadow on the sand his pallor stood out the way a white goose feather on a checkerboard would have done.

Goose feather? For an instant she thought it an image without meaning, an exaggeration of some terrible dark fear of childhood, or innermost wish on a through-the-looking glass plane. Then—she remembered. Feather—quill—pen.

Free association had brought that image into her mind. In that curious way women have of anticipating the worse she'd written and sealed a letter, and placed it in his stateroom where he could not fail to find it.

She'd decided to go out into the desert and—just keep on walking. The poor fellow would know how much she'd loved him when he read the letter. But she just didn't want to be around when the sands ran out. She never could stand scenes, such as going in his arms, and knowing he'd be around a day or two longer, with that terrible dryness in his throat.

Warder was oddly conscious of his wife's presence before he advanced a foot into the ship. It wasn't necessary for him to draw close to her, and hold on tight to her. He had only a look at her. Just looking at her drove all the harshness from his mind.

He'd returned across the tumbled sand to the ship a dozen times, though much of what had happened the last few days seemed like a book from which most of the pages had been torn. There were fears he couldn't shake out of his mind, fears that mocked and shrieked at him, and then his brain would begin to function in an integrated way again, and he'd come stumbling back to the ship to plan a new campaign.

A book from which the pages had been torn! Even the dialogue was tormentingly incomplete, so that the words Jane had uttered yesterday, or the day before, came back to him like a faulty recording monotonously repeating itself.

"Jim, we've enough food—rescue ship—to keep us alive—we could hold out—if we just had—some water—if we just had—some water—if we just had some water."

In one sentence which broke off abruptly he was moving forward into the lock chamber and examining his wife's hands. Pellagra? He knew that it showed first as an erythema, irregular in outline, involving the dorsal aspect of the hands.

"Darling, hold me close. I haven't got it yet."

But despite his torment there were moments when his brain would become wholly clear, and remain clear for several hours, and he knew now that he had himself under control. He knew because his voice was under control and there was no longer any vagueness or haziness in his mind. Though Jane's face was strained he knew that she, too, was holding herself well under control.

He stumbled across the chamber and took her into his arms. Now she was sitting beside him on one of the narrow spring-bunkers opposite the airlock, and his hand was stroking her hair.

"Jane, I've discovered why it fears us," he could hear himself saying. "The devilish thing is en rapport with our subconscious minds. Oh, that's a ridiculous word to use. You'd think I was a French dancing master, or a teacher of Romance languages. I mean it can feel what's deep in our minds."

Now there was a moment's stillness. He had expected that Jane would speak, but she did not.

He moistened his lips.

"It had got inside my brain and it was so bad I knew I had to find the answer, or go mad," he continued. "What puzzled me was that I didn't hate it the way it thought I did. Hate is a continued, intense aversion. It involves an active intent to injure and is quite different from resentment, even rage."

Warder was conscious of raising his eyes, and staring across the chamber at a brightness that hurt his eyes. Inanely the thought came that the desert beyond the airlock, the intolerable dryness and brightness of the tumbled sand, would have had a paralyzing emotional effect on the brain of a scorpion.

"It's hard for us consciously to hate a creature that resembles a mammal, no matter how alien it is. That's because mammals appeal to our parental instincts. All hairy mammals do, and so do big, grotesque hairless animals. They remind us of clumsy human infants."

Warder's eyes were shadowed with the knowledge that had come into his brain. "I didn't consciously hate it, Jane. Not at first anyway, not with the superficial skin of my mind. But the subconscious can hate in a way the conscious mind can't. It can hate anything that walks or crawls."

Jane spoke for the first time.

"You mean you'd have a deep instinctive hatred of anything you couldn't reach in a human way, even if you wanted to be friends with it?" she said.

Warder nodded. "Deep in my mind there would be an instinctive fear and loathing. And if the creature opposed its will to mine, if it tried to prevent me from eating or—"

"Drinking," Jane said, moistening her lips.

"If it tried to bar my way suspicion would turn into a red, killing rage. Subconsciously I'd want to stamp on it."

"It's pretty big to stamp on," Jane said.

Warder stared out of the port that framed the red desolation of Rigel's seventh planet.

"Yes, big. But deep in my mind something has been stamping on every inch of it, Jane. I'm sure it knows that it is being stamped on."

Warder paused, as though seeking for words that would not send a surge of horror through his wife's mind.

"There's no way I can stop it from knowing. Psychiatrists get brief, terrifying glimpses of what human beings are capable of when something rubs the fur on their buried selves the wrong way. Psychologists tell us what's deep in our minds would drive us mad if it wasn't for the barrier we've erected between our hidden selves, and our rational, social selves. We've erected floodgates, but they're usually closed."

He shuddered, as though his thoughts were making his scalp crawl.

"The subconscious mind is a repository of instincts and attitudes inherited from our barbarian ancestors. To a creature that has never had a struggle for survival the dark complex of repressed, anti-social strivings behind the floodgates might well seem as alien and hideous as a—well, a bodiless soul screaming in the void."

Warden made an abrupt, savage gesture, as though brushing away a sharp-taloned horror that was flying straight at him.

"The subconscious can release a rage as remorseless as the black night of space. Thirst can be more tormenting than hunger, and when a man has to endure unimaginable torments everything civilized and decent and kindly in him is in deadly danger of being swept away. When a dry rot demoralization set in, all is lost."

He looked down at her hand trembling on his arm.

"Dry rot spreads, Jane. I didn't hate it at first, I fought against the spreading demoralization, but now the blind black rage in the depths of my mind has coalesced into a tight, hard little knot at the end of a whipcord. A dry rot demoralization. I want to lash out at it, to lash out with that whipcord, Jane."

He wet his lips. "It's like the sort of thing children experience when—"

He hesitated. "Did you ever hear of night terrors?"

"Night terrors?"

"The psychologist Jung believes that the explanation of the night terrors of children lies in a revival of ancient jungle fears and hates. The child fears tearing claws, sharp beaks, the clutching horrors of the dark. That's because in sleep a very primitive layer of its mind awakes and remembers its remote ancestors had to flee for their lives from savage beasts.

"The subconscious goes very deep, so deep that part of it consists wholly of what psychologists call the archaic strata of the mind. That strata would be stirred to a deep instinctive hate of anything alien, a hate akin to primitive man's fear of the evil demons of myths and folk lore. There would be an individualized subconscious hate, springing from torment and frustration, and a still more primitive kind of hate."

"You mean if it could creep under the floodgates," Jane said, moistening her lips. "Are you sure it can?"

WARDER ran his tongue over his lips. "No, I'm not sure. Maybe it's just aware of what's behind the floodgates a little more intensely than we are. If it were an animal I'd say that what's behind the floodgates raises its harls. But it isn't an animal."

A bodiless soul screaming? Warder shook

his head, as though to dislodge the thoughts that were tormenting him.

He was suddenly aware that Jane's fingers were biting into his wrist.

"Jim, isn't there something you could do about that? Isn't there a drug which prevents the brain from functioning below the level of consciousness?"

Warder's throat felt suddenly more parched than it had been. There was such a drug, of course. Exalophene. But he'd always had a horror of drugs which affected the brain, and exalophene was much more than an hypnotic. It could knock out all the primitive pathways within the brain and spinal column, so that the impulses arising from the subconscious could not gain an ascendancy over the mind.

No one really knew just how the drug worked, for the subconscious was not a structural unit within the cerebrum, but a physiological complex spread thin over a dozen areas, some deep down in the thalamus and brain stem, and others fairly recent critical areas within the cortex itself.

Not one really knew, but if the strange beast could be made to believe that its human enemy had undergone a change of heart was it important to know? In minute doses exalophene was a specific for migraine, neuralgia. It was a specific for many maladies, and Warder suddenly remembered that there was a phial of the stuff in the sick bay.

"Jim, I remember now! It's called exalophene! Exalophene! It's used for a lot of things, it's used as a medicine, Jim!" . . .

Later with the bottle in his grasp, Warder felt as though a force had been released within him which he was powerless to resist. He was walking straight toward the beast's burrow across the sand, a hypodermic gleaming in his hand.

Having removed a labeled phial from a still-intact aluminum rack in the sick bay, filled the hypodermic and tested the keenness of the needle with his thumb he was advancing now in bright sunlight with the slow, remorseless stride of a pallbearer carrying his own coffin toward an invisible hearse.

He hadn't wanted to fill the hypodermic and kiss Jane once fiercely on the lips. He hadn't wanted to leave the ship and walk out into the desert with the hypodermic in his hand. But what distinguishes man from the lower animals is his capacity to do not what pleases him, but what has to be done.

In some respects it was a trivial distinction, and it was certainly not an enviable one.

The heat was intolerable, and it seemed to fill all space about Warder. He could hear the sand crackling beneath his boots, and the sunlight on the needle was a splotch of light blinding him.

He wished the horizon wouldn't widen to an immense, furnace-red semi-circle only to contract so tightly about him that he could scarcely breathe. He wished the beast were not squatting in its burrow watching him.

He wondered how much the beast suspected. Did the monstrous creature know that he was going to inject into his veins a massive dose of a drug that would put an end to his torment?

He halted abruptly, his eyes on the great creature's stationary bulk.

"If you would know me better than you do, you must watch what I am about to do," he called out. "There must be no barrier between my mind and your mind. Watch me, reply if you are puzzled. I want you to see deep into my mind."

Could Warder have read the beast's thoughts he would have known that it had eavesdropped on his conversation in the air-lock chamber, and was wondering what he could hope to gain by putting only a part of his mind to sleep.

The man was going to put a part of his mind to sleep. It was hard to understand how only a part of the mind could be put to sleep, and what the man could hope to gain by it. The man's mind would not change in sleep, and there was nothing but hate in the man's mind.

As the great beast sniffed the thin, dry air it suddenly saw that Warder had finished injecting the drug and was staring down at his arm. For an instant there was no change in the man's expression, and then the skin seemed to whiten over the man's cheekbones, and the beast saw that his body was casting a more angular shadow.

It was as though the muscles of the man's back and stomach had contorted, causing him to assume a posture so rigid he seemed less like a living creature than an image carved from the brittle "tikil" of the slope caves.

FOR an instant the man remained as rigidly motionless as a "tikil" carving. Then there came into being on his face bulges and ridges, and he came convulsively back to life again. So swiftly, so hideously back to life that the beast had no time to blank out its thoughts or defend itself against the all-obliterating horror of that which came from the man's mind.

Clashing, tearing, rolling, there swept into the beast's mind a something that was partly stillness and partly screaming chaos. But it was not a stillness like the stillness of the desert at dawn and at nightfall and it was not a screaming that carried with it a sense of rightness, like the birth pangs of a youngling. It was not a screaming that could be endured!

No, it wasn't a screaming, either. It was a pulsing—a steady, black pulsing—wave of a something that was like a swelling explosion, and the great beast knew that it was going mad.

Warder had fallen to the sand, and was dragging himself toward the burrow with convulsive contractions of his entire body. But the beast did not see the twisted features of its enemy, or hear the harsh, unintelligible sounds from its enemy's throat.

For an instant madness came sweeping toward it across the desert with red talons hovering, and then straight down into it madness plunged, and it thought about itself in a way that was horrible and went zigzagging backwards across the mouth of its burrow with its long snout dangling, and shrill ululations gurgling from its throat. . . .

AFTER Warder had passed the canteen to his wife, and she had drained the sweet, slightly fragrant water to the last drop, he walked over to the airlock and stood staring out across the tumbled red wilderness of sand. There was wet sand on the back of his head, and he was blinking like a man who had come up out of a deep dark cave into the blinding glare of Sol. He had come up out of a cave, but the sun was Rigel, and it was hotter than Sol, much hotter.

He had never fully realized just how hot.

"Jim, what drove it mad?"

Warder shivered, and returned across the narrow chamber to stand beside his wife. He put an arm about her, drew her close.

"Jane, if I had used a drug to blot out the hatred and black, killing rage deep in my mind don't you suppose it would have known? It could read my thoughts, remember. It could fathom my intentions, and it wouldn't have been deceived for an instant. It would have known I'd merely put a part of my mind to sleep."

He nodded grimly. "But I suddenly realized I did have a weapon, Jane. A much more powerful weapon than a hand blaster or annihilation ray—a much deadlier weapon—the subconscious itself!"

Warder was swept by a complexity of emotions as he spoke the last words. Having gone down into the valley of the shadow the horror of the ordeal had left its mark upon him, and it was difficult for him to go on.

"I knew if I injected exalophene, I'd lose that weapon, Jane. So I didn't inject exalophene. I searched around instead for another phial, and snatched the phial down, and filled the hypodermic with a shaking fear inside of me. There was fear because, although exalophene knocks out all the lower centers within the brain, the drug I poured into the hypodermic has an exactly opposite effect. It knocks out all the higher centers."

"Jim!"

"Psychiatrists call it archaic regression. The mind retraces the entire course of human evolution, the body assumes a distorted, brutish, almost apelike posture. Unintelligible syllables come from the lips and there are—convulsions."

As though from force of habit Warder moistened his lips. When he spoke again his voice was like a whisper from the tomb.

"That's what drove it mad, Jane. It couldn't endure the suspicion and hatred and red, killing rage in my mind when the floodgates were up. When my mind regressed to a still more primitive level, and all the floodgates went down, the beast was finished."

Jane was breathing hard, and a little shudder had gone through her. "Floodgates—went—down?"

Warder nodded. "All the floodgates. Ironically enough, the drug I did inject was once used to cure insanity. Human insanity—schizophrenia. It was called the shock treatment for insanity."

Warder opened his hand.

Jane looked down at the phial glittering on his palm, her eyes dilating in sudden horror.

INSULIN, the label read.

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WILDROOT
CREAM-OIL
NON-ALCOHOLIC

(Continued from page 6)

have drawn you needing a shave too. Why didn't she—

What's that, Snaggletooth? You say I do need a shave? Well, then, stop lurking behind me and strop up the Venusian razor on the Vulcanian pumice hone. Just now I don't trust Wart-ears to do the job without trying to cut my throat. Ye Sarge will doubtless want to do that himself before some of these graceless kiwi critics finish carping at him. But first, let's take a look through the astro-dimensional telescope at what lies ahead for more faithful pee-lots.

OUR NEXT ISSUE

HAVE any of you kiwis and astrogaters thought about what the world might become if the war were to continue until 1952? This is the theme of John Russell Fearn in his great novel AFTERMATH, which holds down the lead spot in the Fall Issue of STARTLING STORIES.

The sudden cessation of a war which had been prolonged and intensified by the discovery and release of atomic power seemed more like the intercession of a divine hand rather than the work of men themselves. Lincoln Bax, leader of the world's democratic forces, could not understand it.

But great scientist Jan Eberhart and his brilliant assistant, Freida Manhoff, began to realize the truth—that atomic explosions of the war had destroyed a part of the Heaviside layer, causing a new influx of cosmic rays which had stepped up the pace of evolution amazingly.

To learn the exciting results of this needling of nature and of the ultimate disaster, caused primarily by the revolt of the domestic animals, once their intelligence had reached that of pre-stepped-up man and secondarily by some men's continued thirst for power, you'll want to read AFTERMATH. It is John Russell Fearn's most important story to date.

One of the finest of all Hall of Fame Classics, THE SUPERMAN OF DR. JUKES, by Francis Flagg, heads the shorter subjects. Just to give an idea to those who did not see it when it first appeared some baker's dozen of years ago in WONDER STORIES, it tells of the strange fate of Michael Fliani, alias "Killer Mike," torpedo for the vice king of America.

Fleeing the vengeance of his boss, Mike met a doctor who needed a human subject for his glandular experiments—and Mike took the job. What happened to him, to the doctor and to the vice king as a result of the experiment constitute one of the fastest-moving, most fantastic adventures ever conceived. You'll like it, as well as the other fine short stories and features to be found in the Fall Issue of STARTLING STORIES.

BUT with such duties out of the way, it's time the Sarge got down to the real business of the session—letters from the readers—although he doubts that some of the star contributors can spell cat.

Wart-ears, bring on the Xeno, and don't drop the jug this time. Frog-eyes, bring on the mail sack. Snaggletooth, my eyeshade and paper cutter. Let's go.

THE PARTURITION OF JERSEY JOE

By Joe Kennedy

Saturn, ol' Top: Somewhere in the murky darkness a gong crashed hollowly. With a sudden burst of brilliance, the flame leaped higher. The demoniac ceremony was about to commence.

Black-robed attendants began the chant, as the sorcerers standing near the platform made mystic passes in the air.

The shapeless mass of slimy protoplasm that oozed over the platform *stirred!* While the gong bommed once more, it squirmed convulsively and stretched forth a writhing pseudopod.

The hideous creature, known only by the strange name *Joe Kennedy,* was splitting! It shivered and quavered. Then, amid much drum-banging and chanting, it completed its unholy process of fission and on the dusty platform were—*two Joe Kennedys!*

. . . And that, your honor, is the only way I can explain it. Who knows what strange and curious things may lurk beyond our earthly ken? Ah, me. Ah, you. Ah, the other Kennedy.

I hasten to assure all those who find themselves in confusion that there is but one original JK . . . so round, so firm, so fully packed, so free and easy on the keyboard. . . .

Go down to your grocer's this minute. Ask for JOE KENNEDY (Also known as JOKE). Kennedy, the letterhack's delight, is sold only in the famous zipper-top container. It will not grow stale during hot weather. Guaranteed not for years, not for life, but FOREVER! Accept no substitutes. Buy Kennedy in the big economy size and save 4½c on every package.

Have been corresponding with the other JK. He's a very likeable guy, too, but to make matters worse, we find that we're both the same size, age, weight, height, both wear specs, both have brown hair—in short! ! ! ! !

We're trying to work out an agreement to the effect that he'll sign his stuff J. E. Kennedy and yours truly as usual. I look forward to some wonderful mixups as to mail etc. Ah, well. What the heck? Two of us—why not ten or twelve more? Let's have some really worthwhile fun out of it, huh?

Suppose every scientification reader were to go and change his name to Joe Kennedy. Think of the fun we'd have. Hundreds of Joe Kennedys running wild all over the place. I shudder at the thought.

Let's get on to less tumultuous matters. Like the latest STARTLING. Yeah.

Running CAPTAIN FUTURE novels in SS is an extremely shrewd commercial move, but one which many a fan will secretly lament. For the CF series has made itself known far and wide as being an obvious take-off on the comic books and such pulps as the other character mags.

CF is fairly well polished for pulp material and grinds out the tales to be told in an acceptable if somewhat mechanical manner, but the more serious fantast will give up with a scream after wading through one or two Curt Newton opuses.

We don't look for literature in SS, so I'll shuddup. Please, though, don't overuse Cap Future. Once every five or six issues is more than plenty.

Illustrations for the novel this trip were excellent. Note clever use of white ink to give wood-cut effect. Slick.

What say to Clark Ashton Smith soon in the Hall of Fame?

Letter column was unusually readable this issue. Best communique of the issue was C. R. McClellan's. Heheh. Oliver, Greenleaf and Perry outstanding too.

Peggy MacIntyre wants to know what started the great Kennedy on his merry career of ink-spilling. This is a highly difficult scientific problem. I feel sure that the solution is just another one of those things which lie beyond our mortal ken and so forth—or did I say that before?

Fanzine reviews. I object, Saturn. Noble publication TERRIFYING TEST-TUBE TALES referred to as being brashly sophomoric. Hrmpff. Anyway, you liked

the cover. QX CARDZINE, which I ceased editing, is bi-weekly, not bi-monthly. Hrmpff. Other reviews amusing. Hrmpff.

Somebody mentioned "The Arisians." If the truth must be known (why must it) "The Arisians" are the only active fan club in the New Yawk City area. The club has no president or other officials—actually 'tis but an excuse to gather at Wollheim's place and drink his wife's root beer.

Yawn.

I close for the present, leaving you with but a single thought. The original Joe Kennedy is I, the hated and feared dweller of the Jersey cranberry bogs . . . creator of the Grulzak . . . fanzine hack . . . stfan . . . who loves to waste space in promag letter columns.

Like this.—*84 Baker Avenue, Dover, New Jersey.*

Nice to hear that no blood has been shed between Kennedys as yet, JK, but your unrationed beef on the running of CAPTAIN FUTURE in the last issue of SS shows an incomprehension of the galactic motives that lay behind its printing, worthy of a kiwi capable of winning hatred and fear.

When paper rationing forced the suspension of CAPTAIN FUTURE, fans clamored for more about Curt Newton and his coterie—well, it seems obvious, or should be.

Froggy, cut Kennedy's Xeno ration to one jug a month—no, he *liked* the illustrations. Make it two jugs. He'll have to get along on Mrs. Wollheim's root beer until he makes amends otherwise. And what the blankety-blank is a Grulzak? Ye Sarge failed to find it in the FANCYCLOPEDIA.

HELP, HELP!

By Don Harvey

Dear Sergeant Saturn: I have long had the urge to write in to you and now I dood it. I'll be frank with you—I don't like your humor. I don't like your sappy drawings. I don't like your asinine contributors to THE ETHER VIBRATES. I do not refer to your objective criticitizens—rather to the ones like Joe Kennedy, why try to imitate your own repulsive type of humor (Repulsive in the sense that it repels and is not spontaneous).

One thing I like about your SS column are the attempts to draw you. The other and most important thing I like about your magazine is the stories. I've just read the winter issue of SS and liked the stories fine. But the illustrations were terrible.—*Chicago, Illinois.*

Calling Joe Kennedy . . . Calling Joe Kennedy . . . SOS from Sergeant Saturn . . . SOS from Sergeant Saturn . . . Will restore Xeno ration for defense of sense of humor . . . Will restore Xeno ration for defense of sense of humor.

Actually, Snaggie, old tooth, imagine that misguided Earthling putting Kennedy's humor on a par with mine . . . What's that? You say maybe Kennedy has feelings too? Impossible, and bring that Xeno. Ye Sarge is of a sudden thirst inspired by such Plutonian impertinence from a Windy City windbag.

A FEN-VET HAS HIS SAY

By Bob Bradford

Dear Sarge: In April, 1926, I, in company with millions of others, started reading science fiction in magazine form. There must have been millions, for in the last eighteen years at least 999,999 fans have written in and claimed seniority from that date.

Be that as it may, since the age of eleven (don't stop to figure, I'm twenty-nine) I've been on a steady diet of (note: add here all adjectives under category 870, Roget's Thesaurus) stories dealing in science fiction with the accent on fiction.

My first and last fan letter appeared in 1931. The shock of seeing my pride and joy entirely rewritten, down to and including my name, persisted for a good many years. Then, along about 1941, I decided to write another fan letter. Here it is. Any year now, I'll get busy and join the S.F.L. I've been considering that since October, 1934.

So now, Sarge, having properly introduced myself, I shall loose my thoughts on editorial policy. Review them well, for I represent that great, non-rabid mass of readers that are content to pay their money, relax with the stories and go their way dispassionately.

I do not long for the good old days. With the exception of five authors, there are none not now writing that have not been adequately replaced. Wells, Verne, Merritt, Dr. Keller and Weinbaum were the giants of science fiction. They were smooth, interesting and did not have to depend on fast action of the blood and thunder type or new and more startling departures to maintain their stories. They wrote about people.

There is no doubt whatsoever that in time others will arise with the same gift. A respectable portion of the good old days is still ahead of us. In the meantime, for those that are impatient, libraries maintain the best works of Verne, Wells and Merritt. Dr. Keller and Weinbaum have been reprinted in CAPTAIN FUTURE and STARTLING STORIES. What more should any reasonable person want—eggs in his beer maybe?

Just furnish me with easy running stories, no more action than is called for and sort of gloss over the more glaring absurdities. I'll be satisfied. So I'll quit, just as soon as I mention that I have absolutely no WONDERS for the year 1934 in my humble collection. What are we going to do about it?—*742 School Street, Los Angeles 22, California.*

Very well, Wart-ears, bring on Roget's Thesaurus. And bring some more Xeno with you, my lumpily-orificed pet. Shades of the dark star of Deneb! The adjectives under category 870 include:

"Surprised &c; aghast, all agog, breathless, agape; open-mouthed: awe-, thunder-, moon-, planet-struck, spellbound; lost in -amazement, -wonder, -astonishment; struck all of a heap—"

Hey, that's enough! We can take a hint.

What ye Sarge wants to know is who is agape and open-mouthed. Not your Sarge—anyway, not since that dire day when the Xeno vats ran dry. Maybe it's Kiwi Bradford, Snaggy. I'd hate to think he was getting personal about *us.*

So this madman from Los Angeles believes Wells, Verne, Merritt, Keller and Weinbaum have not been equalled. With Wells, yes, ye Sarge is forced to agree. But surely Verne's effective imaginings have been surpassed by reality, Merritt was a fantacist, while Keller and Weinbaum at their best would have to step to keep abreast of such current authors as Henry Kuttner, Fred Brown, Brett Sterling, Arthur K. Barnes, Noel Loomis, Edmond Hamilton, Murray Leinster, Leigh Brackett, Wilm Carver and many others.

Pee-lot Bradford's editorial ideas make restful reading for ye Sarge, and as for the shortage in your collection—well, we printed it, didn't we? Write again at your leisure, you old procrastinator.

AMEN TO AMENDERS

By Lewis Sherlock

Dear Sarge: Ha! ! It's me! ! Ooops! ! Now to my favorite sport of correcting the correctors—but in this case the author is even wronger, so my comments will be persona non grata to both sides. Unless our old friend, the Sarge, has been looking at the bottoms of too many empty Xeno kegs of late, he will realize by now that I am referring to Noel Loomis' classic boner in the realm of mathematics, with a few pertinent remarks on the corrections you published in the Spring ish.

On page 26 of the Winter ish, Noel says that five times ten to the thirty-fourth equals 2/3 of ten to the fifty-first. May we assume that this story was read before it was set in type? If so, we are seriously concerned anent the apparent lack of mental processes in the proofreaders. If you are that short of proofreaders, perhaps the kindergarten class of the local school could be hired to do spare time proof-

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Now to the problem—10 to the 51st equals 1 followed by 51 zeros. Ten to the 34th equals 1 followed by 34 zeros. That times five equals 5 followed by 34 zeros. Now 1,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000 divided by 50,000,000,000,000,000,000,000,000,000,000,000,000 equals 20,000,000,000,000,000. This means the mass of the universe is 20,000,000,000,000,000 times the mass of planet G.

By conversion, we find the mass of planet G is .000,000,000,000,000,05th of the mass of the universe. In percentage figures, this gives us .000,000,000,000,005%, while Loomis' 2/3 equals 66 2/3%. Also 2/3 equals .6666666 and so on to infinity. Subtracting these two figures, we get a difference of 66.666,666,666,666,661-plus %.

This means that Loomis' calculations are more than 66% off. I've seen errors in stf before, but this lad's calculations on the size of a single planet are wrong by a margin of more than half the mass of the universe. Still, he had a nice heavy planet, even when based on my calculations, not his.

In the spring issue, Hugo E. Hanser's letter was a start in the right direction, but he left the problem unsolved. Had he solved it, he would have saved me all this trouble. But I might as well pan Loomis as anybody else, and, buddy, he really asked for it! ! ! Half the universe off—blah! ! ! !

Benson Perry's figuring was closer than Loomis', but he was still way off. I think he lost track of the 5 in the original problem. His answer is five times mine. Benny, you should be more careful—decreasing the mass of a planet to 1/5 of my calculations is serious—to me.

THE ISLE OF UNREASON was the best story in the Spring ish, but a brainstorm of that magnitude should have been full length, not a short. Of course, being a reprint. . . . But it was a good story anyway. Award Malcolm Jameson two green cocoanuts for DEATH BY PROXY. Did you steal this mss, from some whodunit mag or how did it ever get in SS?

I hereby nominate it for the "If so, so what?" section of the "File and Forget" department. Honest, Ed., it is the worst I have ever seen in SS, and that is saying plenty. Ford Smith's ARE YOU THERE, CHARLIE? was quite readable, but his attempts at humor fell flat, and I do mean FLAT! ! RED SUN OF DANGER was strictly CAPTAIN FUTURE. Nuff said??

I am still looking for an answer to one of Joe Kennedy's gags. Yeah! !

All for now, but any more boners, and I'll be back, complete with slide rule and log book. Please, Sarge, how about a GOOD cover on the next ish of SS? And a Hall of Fame classic by Weinbaum soon? So Benny says anti-grav is impossible, eh? If only I had space to take that apart. I suggest both Benny and Ye Ed. read Einstein's Gravity-Magnetic theory. Soooo Loooong, and slap-happy landings.—*Guernsey, Iowa.*

Einstein yet! This is the last straw. This hecow from Guernsey suggests ye Sarge go back to kindergarten. Get out the ray guns, Froggy, and blast him into the Mercurian sea-cow country. It's soggy enough for him to feel at home.

CYGNI SYGHS

By Benson "Boff" Perry

After the rather thorough chastising rendered upon this defenseless fellow about the comparison of *my* cover for CYGNI and *Bergey's* indisputable masterpieces for SS, you probably expect me to sneer at the cover. But no. Twas *fair* for Bergey, despite the orange sky. This might be explained that they were on a different planet.

RED SUN OF DANGER was very well written, although CAPTAIN FUTURE stories all seem to be alike. In fact, it is the best feature yarn I have read and the best novel SS has published since THE GIANT ATOM. The illustrations—hah! And for once it was a *novel.* Fifty-nine pages on this new type.

The shorts were fiendish, but the Hall of Fame classic was one of the best. Speaking of Hall of Fame stories, I don't see how anyone could dislike next-to-last-ish's RADIATIONS OF THE CHINESE VEGETABLE. I thought it was very good satire.

Can hardly wait to miss the coming John Carstairs novel.

THE ETHER VIBRATES was of interest, including the Joe Kennedys, the fellow from India, Chad Oliver's comments and others of interest.

The reviews of the fanzines were good, notwithstanding the fact that you reviewed the first instead of the second ish of CY.

Your idea of dividing the mags into two classes is great, but I think it's unfair putting the news-zines in Class B. NEW CONCEPT also deserved a better position than it got. Maybe you should have noticed that it was *printed*.

How about writing a short note to CYGNI? Would like to pun on your efforts.—*68 Madbury Road, Durham, New Hampshire.*

Somehow, Wart-ears, ye Sarge suspects that the crux of this misspent missive lurks in the final paragraph. So he wants to pun on us, does he? He softens us up with a lot of Venusian bambanana oil about how divvying up the fanzines into two classes is great stuff and stuff, and then tries to slip that one past.

Don't worry, Snaggie, old tooth, he's not getting away with it. If ye Sarge does write anything for CYGNI, *he* will do the punning. Nobody's putting anything over on us, no sir.

Seriously, if possible, your squawk about putting the cardzines etc., in Class B is unsound. It is not that their purpose is lower or their appearance less important than the fanzines, but, darn it, you don't review pro magazines and newspapers in the same column. They aren't the same thing.

As for reviewing the first issue of CYGNI, ye Sarge didn't have the second when he went to press, reviews it in the current fanzimonuim.

A SLAM FROM DODGERTOWN

By Howard Gabriel

Dear Sarge: At last, after all my weeks of waiting, I got a copy of SS in a brown envelope. So, putting on my sunglasses, I look at the cover. It is putrid. The art work for the novel is nauseating. But the CF story was marvelous.

I never complain about drawings, but oh, my (even if this letter isn't published, please tell me who did the interior work for RED SUN OF DANGER. He should be shot.

The ISLE OF UNREASON was good, MURDER BY PROXY just fair. ARE YOU THERE CHARLIE? was cute. But who are the two fellows who always get up early in the morning and buy out all the good stf stories along Fifth Avenue?

Here is my list of the best stories I've read, in order of preference—

1. EAGLE MAN .....Wilcox
2. A YANK AT VALHALLA.....Hamilton
3. SEVEN SPACE STONES .....Hamilton
4. CF CHALLENGE .....Hamilton
5. STAR TRAIL TO GLORY .....Hamilton
6. PLANETS IN PERIL .....Hamilton
7. RED SUN OF DANGER .....Sterling
8. DAUGHTER OF THOR .....Hamilton
9. VALLEY OF SIN .....Hamilton
10. THE STAR OF DREAD .....Hamilton
11. OUTLAWS OF THE MOON .....Hamilton
12. MAGIC MOON .....Sterling
13. COMET KINGS .....Hamilton
14. QUEST BEYOND THE STARS .....Hamilton
15. DAYS OF CREATION .....Hamilton
16. WORLDS TO COME .....Sterling
17. THE MAN WHO TURNED TO SMOKE .....? ?
18. THE MAN WHO AWOKE .....Manning
19. THE FINAL WAR .....Sphore
20. THE SPORE DOOM .....Binder

I know I left out many swell stories, but I'm writing this from memory.

How in the name of a Venusian swamp adder did that quiz kid with all those big numbers who wrote in about the mistake Loomis made think them up? He probably sits up all night with a flashlight and a dictionary looking up each word, seeing if the verb agrees with the subject.

At that rate, I probably read more books than he, and I'm not fourteen yet. I have almost every stf book printed from the 1930's up.—*1450 East 19th Street, Brooklyn, New York.*

Thanks for slapping Hugo's wrist, Howie. But no thanks for your honk on the CF illustrations.

[*Turn page*]

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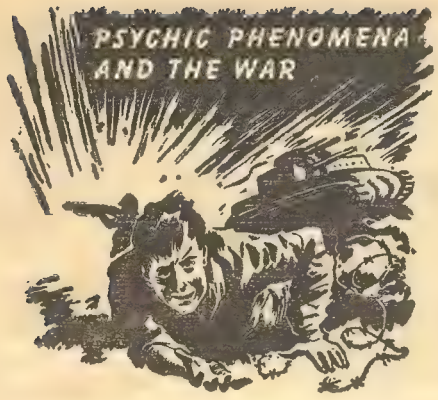

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One of our ablest advertising artists, doing illustration on the side only because he is an stf fan too, turned them out. Apparently, you are one of those misguided sons of the Mercurean non-culture quantum who prefer drawings that look like photographs. You can have 'em, says ye Sarge. Are you there, Wart-ears? Xeno, more Xeno, and plenty of it—pronto!

COVERBLIND

By Robert Davidson

Dear Sarge: One morning in the mail slot I saw a brown envelope. Knowing it was my copy of STARTLING STORIES, I rushed downstairs, opened the clip and . . . *aiyeee! ! !*

I woke up with a cold compress on my head. After putting on my sunglasses and taking a nerve-settling tablet, I took a slow look at the cover. The drawing was okay—but the colors! It looks like an explosion in a paint factory.

Referring to the pic on page 13, who is the little old man in the upper left hand corner?

The stories for the ish are as follows:

1. RED SUN OF DANGER takes the prize. It is one of the best CF stories I have ever read.
2. THE ISLE OF UNREASON. It really deserves to be a Hall of Fame story. Ed Hamilton can really turn out some corking yarns.
3. DEATH BY PROXY by Malcolm Jameson. One of his best stories was TIME COLUMN in TWS (December, 1941).
4. ARE YOU THERE, CHARLIE? An amusing short.

This was one of the best issues of SS since January, 1941, featuring A YANK IN VALHALLA by Edmond Hamilton. Well, I have a little ink left in the pen, so I'll rate the CF's I have read.

1. THE SEVEN SPACE STONES .....Hamilton
2. CAPTAIN FUTURE'S CHALLENGE ....Hamilton
3. STAR TRAIL TO GLORY .....Hamilton
4. PLANETS IN PERIL .....Hamilton
5. THE STAR OF DREAD.....Sterling
6. RED SUN OF DANGER .....Sterling
7. THE FACE OF THE DEEP .....Hamilton
8. QUEST BEYOND THE STARS .....Hamilton
9. OUTLAWS OF THE MOON .....Hamilton
10. DAYS OF CREATION .....Sterling
11. THE COMET KINGS .....Hamilton
12. MAGIC MOON .....Sterling
13. WORLDS TO COME .....Sterling

Hey, fathead, how about an Eando Binder yarn pretty soon?—*1470 East 19th Street, Brooklyn 30, New York.*

Well, the Brooklyn boys really are coming in clumps this time out. But it is beginning to look as if the Moscow boys are going to march into Berlin in spite of that song. Still, perhaps Davidson and Gabriel could start an anti-Hanser club, devoted to increasing Hugo's entertainment value in fewer words. That would make ye Sarge a happy old space dog indeed.

Just in case you didn't read the caption for the page 13 picture, the "little old" man with non-hirsute pate in the upper left hand corner, is Otho, the android. Evidently, in the excitement of battling the cannibal plants, he lost his toupee (we call it a patch in refined Saturnian circles).

FEN FREN

By The Circle of Ten

Gentlemen: This letter is strictly for the editor, Sergeant Saturn (I must call him that because he gives no sensible name for himself) and the few sane readers of the magazines STARTLING STORIES and THRILLING WONDER STORIES. It is my wish that this letter be printed in the magazines mentioned above so that some of the readers (if they have any brains at all) will wake up and start complaining about a few things that a certain group of boys, including myself, have noticed. But before the start to blast you off your swivel chair with white-hot complaints, we are going to tell you a little about ourselves.

We call ourselves The Circle of Ten, and the title actually describes us. At our first meeting, one issue

of the latest printing of SS, TWS and CF was given to the chairman, one from each group of three, by the president, the tenth member. Then the meeting was adjourned.

A week later the Circle met again and the last member of each group handed in the now thoroughly read magazine to the president and his written opinion to the chairman of his group. We then conferred until we reached an understanding about what could be done to improve the magazines.

Since we were not blessed with a typewriter, we made notes and kept them filed until a few days ago when we managed to get a machine. Since I am secretary, the job of writing this letter fell upon me. I intend to make it very hot, for people pay no attention to a letter full of pleases. I am going to confine my remarks to the Winter Issue of SS.

Cover—from now on, use heavier paper. The present stock is flimsy, thin and tears too easily. The art work was all right except for one thing—if the temperature were warm, the man would be roasting, if it were cold, the woman would be freezing. Have the artist make up his mind.

THE ETHER VIBRATES—Ever since we started to argue about this section, we always ended with the same answer, quote—"The language used in answering the letters of the readers by this so-called Sergeant Saturn is decidedly moronic. If there were some sensible answer for this well-mixed jumble of letters that is used for replies, it would be excusable, but there is none. We think that all of the all too few sane readers will agree with us on this point. There has been nothing wrong with the English language so far, so why not use it—and that goes for the lads that send in gems of illiteracy and call them letters." Unquote.

Stories—IRON MEN was voted unanimously as one of the best you have run, but the rest of the yarns were emigrants from a garbage pail and smelled worse.

THRILLS IN SCIENCE—Excellent.

Interior art work—Excellent, but Mr. Bergey should have some advice on what we want in art. We have decided that the most interesting designs are, quote—"The most exciting and interesting designs are machines, control boards of machines, rocket ships in action, control rooms of rocket ships and cities like the CITY OF GLASS for covers in full color." Unquote.

Suggestion—why don't you join the magazines into one large issue and charge 30c for it? It would be more popular, because you could go into a store and buy all three at once. As it is, you have to traipse from store to store, trying to find the magazine of your choice, and if you are lucky enough to get one, probably the stories of your choice are missing.—*No address given.*

Bring on another jug, Froggy, and make haste. This is going to be a thirsty job for ye Sarge. And load up the ray guns to blast this puerile Circle of Ten. They have a few blasts coming, methinks, after the way they have blasted this old Astrogator.

Taking up the charges in order, cover stock is mighty hard to come by these days, or don't you pee-lots know there is a war on? This is no excuse for an inefficiency that does not exist with ye Sarge, but a true explanation. And when you get a trifle more mature—yes, even cretins reach a level of relative maturity, Snaggie, old tooth—you'll discover that, in relative clothing of the sexes, even on present-day Terra, frere Bergey is far from inaccurate.

As for ye Sarge, he answers them as they come, and the letter writers themselves set the pattern—which is as it should be. We have no Axis to grind except the Terrene one that is already taking a grinding. And as for literacy, deciphering your letter and putting it into English was one which sorely taxed this old space dog's illimitable resources.

As for combining the magazines to save leg muscles, ye Sarge is considering having a special Venusian dunce cap made up to send, gratis, to the authors of such asininities. So far, this al-

[*Turn page*]

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leged Circle of Ten seems a bit on the square side. Give them a triple blast, Froggy, and bring on another jug. This one is empty. No wonder the Circle didn't give an address. They didn't dare!

DALLAS DOLOROUSNESS

By Jerry Mandel

Dear Sarge: As I squat here, scribbling this masterpiece, I think (believe it or not!) of you. So, now for a few pet gripes and maybe bouquets. I know you just love gripes, Sarge. Xeno is composed of 99 and 44/100th % gripes anyway.

I have been a good fan of CAPTAIN FUTURE and have haunted the magazine shops of my fair metropolis in hopes of finding a new mag about my favorite Futureman.

We shall start with the "cover." According to the story, Grag is seven or eight feet tall. On the cover, if Joan stood up, she would be taller than Grag. The BEM is swell. By the way, what holds the (CENSORED) up on Joan? Now for a look at Grag. Look at his back! Either his metal body bends like a human's or someone (maybe Otho) took a hunk out of him with an axe. Is the black spot at the lower right the Black Moon, or did Bergey spill the ink? P.S. Joan is overdressed, but I like it (tweet-tweeeet).

The story RED SUN OF DANGER was swell. Sterling will get my vote any time. Joan is okay on pages 11 and 13. The artist of same had better watch out or he will be kidnapped—I mean! The OPA couldn't accuse Joan of hoarding (stop that infernal sighing, Wart-ears and Snaggletooth!).

ARE YOU THERE, CHARLIE? was just too cute for words, but pardon the query of an outsider—what was the plot?

DEATH BY PROXY sagged in the middle, but has an extremely clever ending. Let's have more like THE ISLE OF UNREASON. Well done!—*3915 Prescott, Dallas 4, Texas.*

My word, Wart-ears, what a hot chimney! Let him dig his own plots!

YEAGER, YEA?

By Albert Yeager, Jr.

Dear Sarge: Here I am again with cartloads of comment on the Spring SS. Tho this may amaze you, I thot the ish was, on the whole, a very good one. Nothing exceptionally good, *but,* what is more important, nothing exceptionally bad.

THE COVER—naturally by Bergey, with a definitely different type of hero, an inhumanly human heroine and a stereotyped BEM. Orange sky? Oh, well, better than usual, I guess.

RED SUN OF DANGER—Tho most of the phervent CAPTAIN PHUTURE baiters will disagree, I thot that it was one of the better novels in recent SSs hmmmm.

ARE YOU THERE, CHARLIE?—Faintly humorous, but far too typically Ford Smith. I will never forgive him those "bug epics" of yesteryear.

DEATH BY PROXY—Good.

THE ISLE OF UNREASON—Very good, altho not entirely worthy of being called a classic. Our hero seemed to change character far too fast, as did Hara.

THE ETHER VIBRATES—We are amused and admittedly pleased to note that the Durham combine of Perry, Yeager and CYGNI are getting on ye Sarge's nerves, if any. Also noticed that you reviewed CYGNI #1 rather than CYGNI #2, which was naturally infinitely better.

And then come the inside illos. It would be nice to see a Finlay every now and then, if only to relieve the monotony.

THE WORLDS OF TOMORROW and THE FUTUREMEN were both quite naturally their normal good selves. THIS STARTLING WAR was, as usual—lowwwzzzeeeeeee!!! Well, thats about all until next time, and let this be a lesson to you.—*48 Mill Road, Durham, New Hampshire.*

Well, Froggy, we certainly seem to have steamed up the Durham dolts by reviewing their inCYGNIficant fanzine last time around the galaxy. Let's hope they like this review better. At least their cover was an improvement. But mostly it had the same old fenpenmen behind it.

So you want to see Finlay, Kiwi Yeager—

well, sorry, but he was at last hearing in G.I. khaki, far away from thoughts of dyktawo and BEMdon. However, SS and TWS are about to unveil a honey of an artist new to the field in L. Sterne Stevens. Watch for him—his brush-work and drawing are outstanding.

HERE COMES THAT MACK TRUCK AGAIN!

By Peggy McIntyre

Dear Sarge: To begin with, thank you kindly for your detailed explanations. It must have taken an awful lot of Xeno to get you thru them.

And here are some more questions, just as I warned you.

1. In various stf mags, I've heard Lilith mentioned, sometimes as a woman, sometimes as a planet. Encyclopedia says she was Adam's first wife. How about it, Sarge, or some other fen? Can you enlighten me?

2. Do any of the fen have old stf mags, especially some of the LENSMAN series, that they'd sell me? If so, let me know.

3. Who is Ghu Ghu and who is Slan?

4. Where did you come from, Sarge (they do say men like to talk about themselves)?

Best letters this ish were by Benson Perry and the two Joes. C. R. McLellan's was what I call a masterpiece of brevity. What happened to Chad Oliver? Maybe he's in luv, huh? Joan McKinney had a very good point too, which I agree with. Give us undressed cover boys, and I, for one, won't holler about undressed cover girls.

RED SUN OF DANGER was wonderful. I love stories that leave you with mysteries yet to be solved. Hope we have another CAPTAIN FUTURE epic soon. THE ISLE OF UNREASON was fine, very different from the usual run of Future stories, and the FUTUREMEN features were very interesting. The other two stories don't rate mention. After all, the mag is supposed to be startling, not faintly amusing.

Don't worry about the Joes too much, Sarge. I'm sure it will all work out for the best. Maybe they'll eat each other up.—*2416 Russell Avenue, South, Minneapolis 5, Minnesota.*

Roll out a half dozen barrels, Snaggie, old tooth. It looks like a long, dry summer. Evoe and evocations! Well, here goes, and in order again, so Snaggletooth can ration the Xeno.

Lilith—like you, the Sarge dived for the Brittanica. There she is mentioned as a she-demon of the Rabbinical texts and ancient folklore. It seems, after preceding Eve as Adam's first mate, she took to the woods and became a demon. Apple shortage, maybe. As a planet she is more fiction than science.

Only the fens can answer the LENSMAN business.

Ghu Ghu, according to the FANCYCLOPEDIA, is "a beetle-bodied monster living on the sunward side of Vulcan, who telepathically controls a zombie named Don Wollheim, Wollheim itself being regarded as ghughu by its followers." In other words, just a fen cult.

Slan is, according to the same authority, "a type different from Homo Sapiens by mutation, the most noticeable characteristics being two hearts, tendrils in the hair which give the power of telepathy, and greater intelligence than H sapiens. There are tendrilless slans who lack the telepathy tendrils because their genes were tampered with, but will eventually have true slans for their descendants. Slans were natural mutations, freaks who happened to have advantageous features, the children of Samuel Lann, etc." In other words, just another fen cult.

As to my origin, Peggy, most of you letter writers make that all too plain every issue. As to what happened to Oliver—well, you tell us what *did* happen to Oliver. And ye Sarge can

[*Turn page*]

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THE FRIENDLY FIGLEAF

By E. E. Greenleaf, Jr.

Dear Sarge: Glad to see CAPTAIN FUTURE back. I always did like that fellow. I looked at the cover—and faint. For once, my dear Saturn, the cover *almost* depicted a scene in the story. Notice that I say *almost*, for in the story Joan wasn't wearing that futuristic bathing suit. However, that's one liberty I didn't mind. Oh, yeah—when Sterling said "dragon" in the story, Bergey evidently (misspelled) took him literally. *He drew a fire-breathing one! ! ! !* I haven't laughed so much since Oog camouflaged himself as a jug of Xeno and you thought it was the real thing.

Continuing with the art (?) inspection, we find that it is obviously Donnelly's work gracing the lead novel. Hamilton's yarn had a nice pic also.

The lead novel was excellent. I leaped for joy when I found that Captain Future was on the trail of the Kangas.

The funniest scene in my opinion was near the beginning when Grag wondered why vitron was so important, for he never took it, and Otho answered, "Only we humans take it." But of all the Grag-Otho feuds, the two best were in STAR TRAIL TO GLORY. Grag was mixing mud, oil and other messy substances and, in answer to Otho's question as to what he was doing, answered that he was making another android to keep him company! Later on, at a dance, Otho got his revenge. He told the guests that Grag was just an ordinary man in disguise and that they should take off his metal suit. Naturally, Grag got nervous—and mad.

The Hall of Fame story was excellent, but not as good as the novel.

Two Joe Kennedys, huh, Sarge? Tsk, tsk.

Sarge, in my letter, I said that I was the only fan in New Orleans. Well, I am no more. For soon after I sent off that letter, a N.O. fan got in touch with me. Then, this past month, I found two more. So I would like to announce that if there are any fans in the city who would like to help form a stf club, or would just like to get in touch with another fan, either drop me a line or phone me.

I gotta go now, for my pesty little brother is after me to finish this letter so he can use this typewriter. *—1303 Mystery Street, New Orleans 19 Louisiana.*

Well, well, Kiwi Greenleaf. Weren't you a little slow about writing in this time? You just barely got under the wire. And as a judge of unsigned illustrations, you belong in the odoriferous Valley of Schmell on the far side of Jupiter itself. In the first place, the drawings you mentioned were by Wilbur Thomas, not by Donnelly, and in the second place, her name, as has so-often been said in these columns, isn't Donnelly, but Donnell. Got it?

Quick, Froggy, the Xeno. The Sarge is dying!

Glad you have found company to share your miseries, Emile—and why the EE this trip? Trying to be two-thirds of an Evans? Or what? Good luck with your club aspirations. I'll keep a SFL charter on the fire for you.

BASE HITS

By Ed Farnham

Hiya, Sarge, you ol' Xeno tank! Greetings! Have just finished RED SUN OF DANGER. Mark up another home run for Brett Sterling. Here is a suggestion for Sterling and Leigh Brackett. Why don't you two Ares get together and co-author a story, using characters never before used by either of you? Your readers would get a treat that would top anything yet printed. What do you say? ? ?

Now for the short stories in the Spring Issue—

ARE YOU THERE, CHARLIE?—out at the plate. Dull. No action. Braaaackkk.

DEATH BY PROXY—safe at first. Anything is possible, but it reads like a detective chiller.

ISLE OF UNREASON—safe at first, but a close shave. The only thing that saved this story was the

sock Allan Mann handed the Director. Every time I find a poor story in SS or TWS I want to sock th' Sarge. Huh?? Well, I can dream, can't I? From now on, if I don't find Sterling or Brackett in our mags, you lose 15c.

Say, but I sure did get a kick out of the letter from Joan McKinney. There's a gal to ride the river with! Boy, did Joan ever toss a brick at the ol' Sarge! Wonder if her aim is as good with a rolling pin? Huh? Oh! Izzat so? Not a chance! I'm fair, fat, forty, bald and cross-eyed, and my ears flop in the wind ever since I got hit with a ball bat ten years ago. Huh? Oh, I razzed an editor of a mag. And he caught up with me.

Now for the cover, and I'll quit. Another BEM! Joan Randall wearing next to nothing, and Captain Future in a suit of armor. BRAAAACKKK for the cover. Why you give us a scene in space with a space ship and the good (?) old Earth in the background? That cover lit up the whole store, so they could turn off the lights. Three cheers for the ol' Xeno tank, STARTLING STORIES and Joan McKinney.—*1139 East 44th Street, Chicago 15, Illinois.*

Well, Kiwi Farnham, you certainly struck out. That wasn't Curt Newton on the cover, but Grag, the old robot himself. Surely you should know him by sight after all these years. Tsk, tsk, Snaggie, old tooth.

Well, Wart-ears, that cleans the bottom of the mail sack for this trip as well as the bottom of this jug. So close up the space ports and bring on more Xeno. Froggie, chart a course for Arcturus. The warm weather is upon us, and the hills on the third planet outside of the North Star should be just the spot to spend a cool couple of weeks—until the messages from Earth get bothersome again. Evoe and evast. We're off. See you all at the banquet.

—SERGEANT SATURN.

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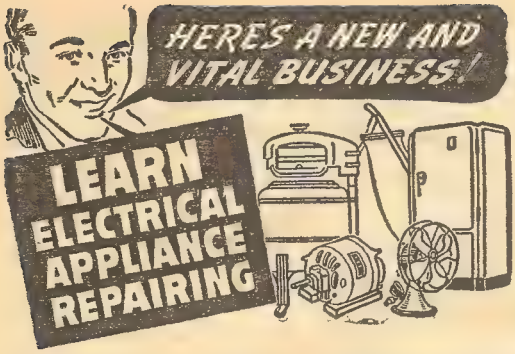

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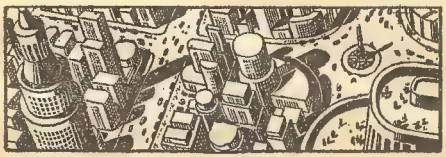
REVIEW OF THE SCIENCE FICTION FAN PUBLICATIONS

By SERGEANT SATURN

BIG fanzine news of the moment is, of course, publication of the FANCYCLOPEDIA by Messers Speer and Ackerman of the Los Angeles Speers and Ackermans respectively. However, since ye Sarge is giving the monumental achievement full play in THE ETHER VIBRATES, this space will continue to be reserved for less



ambitious efforts on the part of fan publishers and editors.

Dat ole debbil time warp is responsible for the smaller number of fanzines to be reviewed below. However, by next issue, fanzineditors whose publications are still among the missing should have been heard from.

Gird up your loins and put out your protective force fields, publishers, editors and contributors, for the old space dog is in full cry after the seats of your literary pants. As in the previous issue, he will operate with or against both an A and a B list of fanzines, dependent upon the quality of the mags themselves.

ACOLYTE, 1104 South Georgia Street, Los Angeles 15, California. Editors, Francis T. Laney, Samuel D. Russell. Printed quarterly. One issue, 15c. 50c a year.

The best of the fanzines keeps up to the mark behind an excellent Alva Rogers cover, with stories by Clark Ashton Smith, Anthony Boucher, etc.—considerable poetry by Hillman, Leiber, Tigrina and Rimel—numerous articles including a Harry Warner translation of a Leon Lemonnier essay on Poe and the French Parnassians and even a couple of caricatures by Virgil Partch. Despite an editorial feuding with Searles (Laney seems to be in feudin' form of late) it is so far and away the most adult and finest magazine in the field that it can scarcely be said to have competition.

CYGNI, 68 Madbury Road, Durham, New Hampshire. Publisher, A. Yeager, Editor, Benson Perry. Printed bi-monthly. 10c per issue, 3 for 25c, 7 for 50c.

Editor Perry leads off the second issue of this more-or-less orthodox fanzine with the only sonnet your Sarge ever saw which was divided into two stanzas (shades of Petrarch!). He also runs a straight AA, BB, CC etc. rhyme scheme in couplets throughout. Zowie!

For the rest, Tucker is present with an article on how not to write fan humor (he should know. SS.), as are Kiwis Waible. Hamel, Fisher, Krueger and

Kennedy. Cover by Chas McNutt is fair enough, but interior art is unmentionable in polite society. Fan poll results show Ackerman breezing in ahead of Tucker for top honors. Krueger is also present with a full-page ad of books for sale and books wanted.

FANTASY COMMENTATOR, 19 East 235th Street, New York 66, N. Y. A. Langley Searles, editor. Printed quarterly, 20c per copy 6 issues for $1.00.

Editor Searles has pretty much taken possession of his own neatly-printed, unillustrated fanzine, being present with the editorial, two articles and a lead book review of Malden's NINE GHOSTS, as well as another critique on past decades in STF.

Thyril L. Ladd (Searles?) is present with a lengthy and exhaustively informative review of virtually every "lost-world" book, story or pamphlet ever printed in the language still called English. And, believe it or not, Christina Rosetti has actually been disinterred from whatever Pre-Raphaelite heaven she was floating around in sans snood or feather cut and re-embellished for free-domain publication with a sonnet, AFTER DEATH. Next issue, probably Mrs. Hemans.

OUTLANDI, 637½ South Bixel Street, Los Angeles 14, California. Editor, Forrest J. Ackerman. 10c per copy.

Ackerman sets sail in full flower of sophomoronic wit in chase of SAPPHO—with some nonsensical "modern" verse dedicated to various fans in the name of satire. Some of the verses (?) are amusing.

SHANGRI-L'AFFAIRES (issues No. 20 and 21), LASFS Clubroom, 637½ South Bixel Street, Los Angeles 14, California. Editor, Charles Burbee. No price listed.

The journal of the LASFS continues in its usual gossipy vein, complete with current feuds, resignations, challenges, scandals and all the other doings of the South Bixel Street gas-house gang. Even Burbee resigned, but returned when his spleen had cooled, although Morojo, Laney and Crozetti are remarkable by their current absence. This gang apparently thrives on a constant diet of bickering. At any rate, the quarrels make the magazine more amusing. Keep fighting.

THE NATIONAL AMATEUR, Elizabeth, New Jersey. Editor, Burton Crane. Published quarterly. Annual subscription, $1.00.

This dullish and dignified record of the NAPA hardly belongs in the fanzine class. However, ye Sarge is including it because it mentions ACOLYTE and has a review of poetry by H. P. Lovecraft far more interesting than any of the late author's fictional efforts. It is also the finest typographical job in the entire amateur field by far. And how about getting Willametta Turnepseed to adopt a *nom de plume* of something—at first I thought she was a gag.

VOM, 6475 Metro Station, Los Angeles 55, California. Editor, Forrest Ackerman. 15c per copy, 7 for $1.00.

Excellent cover by E. T. Beaumont and even better back cover by Alva Rogers. Letters from all the regulars, with F. Towser Laney holding forth on (of all things) chocolachantootsie Billie Holiday. No beef with her phrasing, but Laney can only have heard her on records, because she is, in person, one of the few singers who is consistently off-key—in her case sharp rather than flat. Judy Ellington, who can't carry Billie's music case, also suffers from same affliction.

VULCAN, Route 1, Ripley Tennessee, Editor, Lionel Inman. 10c per issue, 3 for 25c.

Rather handsomely illustrated anniversary issue in which Laney (what, again?) tells all in the latest LASFS schism. Other contributors include James R. Gray, Ronald Clune, Harry Warner, Gerry de la Ree and Editor Inman. All in all, an entertaining job, in spite of tedious explanations by brother Laney et al.

Zound, more Xeno, Snaggletooth, that mops up the A group of fanzines. A more or less brutal listing of the less pretentious (but not necessarily inferior) efforts will follow as soon as the Sarge has wet his whistle until it toots.

There, that's better!

[*Turn page*]

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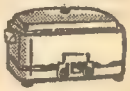

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On the whole, the list is not impressive this time. How come, kiwis? You were really pouring it on. No LeZ, no CHANTICLEER! What gives? Ye Sarge is getting a crick in the cervical vertebrae turning up his nose. But here goes for the B list:

BLACK STAR, SISFA, 13,618 Cedar Grove, Detroit 5, Michigan. Editor, Kent Bone. Free to SISFA members, 5c per copy to others. The SISFA bible contains lists of new members fenbiographies by such notables as Kennedy, Kuttner and Sehnert, is, in short, a fan-album for society members. Good for its purpose.

BUFFLOCON NUMBER ONE, 123 Edna Place, Buffalo, N. Y. Editor, Ken Krueger. No price listed. Belated account of the mad goings-on at the Krue-convention last September in pamphlet form. Humor a trifle sophomoronic, but doubtless apt for the occasion.

COUNT WACULA, 1607 North Philip Street, Philadelphia 22, Pennsylvania. Editor, S. Mason. 10c per issue, 4 for 35c. For all ye Sarge knows, maybe this lunacy *is* put out by a bunch of vampires. However, zombies would be more like it.

CARDZINE, 123 Edna Place, Buffalo 8, N. Y. Editor, Ken Krueger. 6 for 10c. Joe Kennedy gave up the ghost on this card fen gossip job, and Ken Krueger has taken over. Your Sarge is glad it wasn't allowed to die on the vine.

FANEWSCARD WEEKLY, 1443 Fourth Avenue South, Fargo, North Dakota. Editors, Dunkelberger and Kay. The best of the fencards is still coming out, despite editorial illness and a feud (patched up, suh) with the mighty Tucker. Continues to pack more fen-formation per square inch than any other publication in the field.

FANTASY FICTION FIELD, 6401 24th Avenue, Brooklyn, N. Y. Editor, Julius Unger. 8c per copy, 4 for 25c. Current issue seems to run more to endorsement of 4SJ Ackerman than to fen trading opportunities. However, the lapse, we trust, is not permanent.

FANTASY-NEWS, Box 7316 Baltimore 27, Maryland. Editor, Will Sykora. 3 for 10c, 32 for $1.00. Fantasy news threatens to become a weekly this year—so far, no copies of new set-up, but the paper remains a big help to fandom with its close pursuit of publishing and society news. FN SEMI ANNUAL promises to be a hit when it appears, with ye Sarge a contributor. So if it isn't a hit, Sykora will know whom to cast asparagus at.

MARTIANNEWS-LETTER, 548 North Delrose, Wichita, Kansas. Editor, T. L. Streiff. N price listed. A single sheet of typed paper (one side, please) containing Wichita fengossip in interplanetary dressing.

NEW CONCEPT, Route One, Carnation, Washington. Editor, Harry Loren Sinn. No price listed. Jim Gray, Joe Kennedy, Bob Tucker and others unite to make this one-page printed job good in its second appearance. Hope Editor Sinn can keep it coming, as it is a lot easier to read than most fanzines.

SHOTTIE BOP CARD, 1305 West Ingraham Street, Los Angeles, California. Editor, Walt Daugherty. 2c per copy, 6 for 10c, 15 for 25c. Erratically published fancard concerned mostly with Los Angeles doings.

Withal, a puny list indeed—but mayhap the holidays (not Billie, Laney, old cooty) slowed up the mimeo and hectograph machinery. Ye Sarge is looking forward to an increased list for the next trip around on the fanzine circuit.

Take her awaaaaay, Frogeyes! It's high and low time we took off for the outer galazies again. Batten the hatches and load the rocket tubes. We're off in a cloud of Xeno fumes—until next trip.

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FRANK Belknap Long, perhaps considering a mere novel (even one as exciting and effective as THE HOLLOW WORLD) beneath explanation has, instead, contributed a highly entertaining and revealing self profile. By the way, just how he

FRANK BELKNAP LONG

succeeded in making a self profile is something only Mr. Long can answer.

However, here it is, and on his head be it:

Born in New York City a little after the turn of the century. Educated New York public schools and New York University, School of Journalism. Have contributed about 400 mystery, adventure, detective and science fiction stories to 50 magazines in United States and Canada. Work has been included in John Day, Macy-Masius and Blue Ribbon Classics anthologies. (*Creeps by Night*, edited by Dashiell Hammett, *Modern Tales of the Supernatural*, *Not at Night*, *More Not at Night*, *etc.*) Also critical articles on supernatural horror in literature, book reviews, and a preface to Century Company biography of Ambrose Bierce.

Boyhood ambition—to be a far-roaming naturalist in the Louis Agassiz tradition. Held to this ambition tenaciously from the tender age of eleven until I sold my first story at the age of seventeen. Then embraced a career of free-lance magazine writing which I have not yet abandoned, though like a good many writers of my acquaintance I have occasional sterile periods extending over several weeks which make savage inroads on my income.

Extra-curricular activities in recent months have included trying my hand at comic book writing (sometimes you can pound 'em right off) occupying one of

[*Turn page*]

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seventeen editorial desks (behind a haze of tobacco smoke) on a popular science slick, and script reading for a major film company. Two of these activities still take up some of the slack.

Of mixed New England and Pennsylvania Dutch ancestry. A good many of my forebears have been rather colorful rebels, subtly or aggressively at odds with their environment. A direct maternal ancestor, yclept Edward Doty, had the distinction of being the only indentured and non-puritanic lad on the Mayflower. He was the first man to fight a duel on the American continent, was roundly censured, and rumor has it he had forty-eight children.

Collateral lines include two Civil War generals who were decidedly characters. Paternal grandfather, a building contractor, erected the pedestal of the Statue of Liberty in 1883, and I still have the flag which was draped around Miss Liberty's arm at the time of the unveiling, and a dim recollection of being carried up into the torch to look out over New York harbor at the age of three.

I have still retained my boyhood absorption in all branches of natural science, and other interests include what the late H. P. Lovecraft called "Supernatural Horror in Literature," detective murder mysteries, realistic contemporary novels, clinical case histories in the psycho-analytic field, travel (books about it, and the real thing when circumstances do not stand in the way) antiquarian research, museums of art and natural history, good plays, nut-brown ale, checkers and long walks in the country.

Favorite authors: Poe, Bierce, Blackwood, Dunsany, Machen, Emily Brontë, Joseph Shearing, Turgeniev, Thomas Mann, and Jack London. Favorite poets: Shelley, Keats, Coleridge, Swinburne, Heine, Robinson Jeffers, Carl Sandburg.

Fellow-writers with whom I have either collaborated, or enjoyed long shop-talk discussions include (or did include, for a few have passed beyond the veil) H. P. Lovecraft, Robert Howard, Otis Kline, Manly Wellman, Oscar J. Friend, Clark Ashton Smith, E. Hoffmann Price, Malcolm Jameson, C. L. Moore, Otto Binder, August Derleth, Donald Wandrei, Howard Wandrei, and Hank Kuttner.

Am of medium height, with dark hair and eyes, like to wear old clothes when I write, or saunter forth for a brief stroll in the gathering suburban dusk. Am a bit shy, and shun personal contacts until I know a person quite well, when I have a tendency to expand.

Psychologically I am in the main what Adler would call a "sensationalist introvert." I.E.—a person who has a tendency to draw experience into himself, and transform it into richly tapestried fantasies. This combination, incidentally, is rather rare, for most introverts are "intuitives" and most "sensationalists" are extraverts.

THE RED DIMENSION

(Concluded from page 72)

Now, dear world of which I am but a miserable outcast, praying for death to relieve me of my suffering, let me close this chapter in my book of life. If any story succeeds in reaching the world, the world itself will know and believe that I, Arnoldi Kherkoff, did not murder my beloved benefactor, Dr. Ivan Korsakoff, as the courts of Russia believed.

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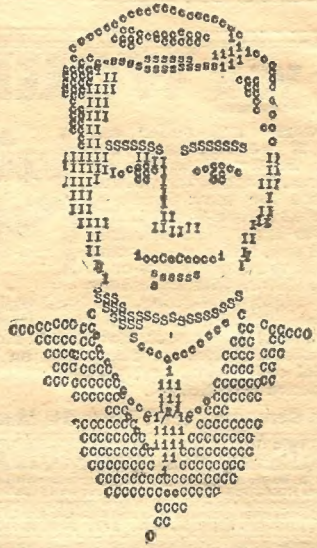

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